DOCUMENT RESUME

ED 226 254 CE 035 251

AUTHOR	Harrington, Lois G.; And Others
TITLE	Guide to Vocational-Technical Education Program Alternatives: Secondary and Postsecondary. An Introduction. Competency-Based Vocational Education Administrator Module Series.
INSTITUTION	Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY	Consortium for the Development of Professional Materials for Vocational Education.
REPORT NO	ISBN-0-89606-113-2
PUB DATE	83
NOTE	77p.; For related documents see CE 035 239-250 and note on ED 212 839.
AVAILABLE FROM	American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, Athens, GA 30602 ($5.15).
PUB TYPE	Guides - Classroom Use - Materials (For Learner) (051)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Adult Programs; Adult Vocational Education; Apprenticeships; Clinical Experience; *Competency Based Education; Continuing Education; Cooperative Education; Disabilities; Educational Planning; Internship Programs; On the Job Training; Postsecondary Education; *Program Descriptions; Program Development; Remedial Programs; Secondary Education; *Special Programs; Student Organizations; Supplementary Education; *Vocational Education; *Work Experience Programs
IDENTIFIERS	Capstone Programs; Shadowing

ABSTRACT

Intended as a supplement to the Competency-Based Vocational Education Administrator Module Series, this guide overviews the typical vocational programs available and the general kinds of requirements involved that would have implications for program planning and budgeting. Part 1 of three parts defines what is meant by vocational education. The goals, principles, and organization of vocational education are discussed. Part 2 describes six types of alternative programs: integrated occupational experience (cooperative education, capstone experiences, on-the-job training, apprenticeships, clinical experiences, internships, shadowing); supplemental/remedial programs, including topics, structures, and implications for programs and services; special needs programs and services; competency-based education (CBE), including essential elements and desirable characteristics, differences between CBE and conventional programs, advantages, and implications for program planning; vocational student organizations; and adult/continuing education programs, including program subjects, delivery methods, marketing, and personnel. A sample checklist provides a general overview of the steps and criteria related to the development of local program plans. Part 3 suggests an optional activity--a visit to one or more program alternatives. An observation form is provided. (YLB)

ED226254

Guide to Vocational-Technical Education Program Alternatives:

Secondary and Postsecondary

An Introduction

COMPETENCY-BASED VOCATIONAL EDUCATION ADMINISTRATOR MODULE SERIES

Consortium for the Development of
Professional Materials for Vocational Education

Robert E. Norton, Consortium Program Director
Lois G. Harrington, Program Associate
David R. Groer, Graduate Research Associate
Nancy F. Puleo, Program Assistant

The National Center for Research in Vocational Education
The Ohio State University

1983

ISBN 0-89606-113-2

Copyright © 1983 by The National Center for Research in Vocational Education, The Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210.

CE035251

Published and distributed by the American Association for Vocational Instructional Materials (AAVIM), 120 Driftmier Engineering Center, University of Georgia, Athens, Georgia 30602, (404) 542-2586.

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

L Pfister

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Development Sponsorship

The development of these materials has been sponsored by the Consortium for the Development of Professional Materials for Vocational Education. The following states have been members for one or more years:

- Arizona
- Florida
- Illinois
- Michigan
- New York
- North Carolina
- Ohio
- Pennsylvania
- Texas

Developed by

THE NATIONAL CENTER FOR RESEARCH IN VOCATIONAL EDUCATION
THE OHIO STATE UNIVERSITY
1960 KENNY ROAD • COLUMBUS, OHIO 43210

The National Center for Research in Vocational Education's mission is to increase the ability of diverse agencies, institutions, and organizations to solve educational problems relating to individual career planning, preparation, and progression. The National Center fulfills its mission by:

- Generating knowledge through research.
- Developing educational programs and products.
- Evaluating individual program needs and outcomes.
- Providing information for national planning and policy.
- Installing educational programs and products.
- Operating information systems and services.
- Conducting leadership development and training programs.

Published and distributed by

AA VIM
AMERICAN ASSOCIATION FOR VOCATIONAL INSTRUCTIONAL MATERIALS
University of Georgia
120 Driftmier Engineering Center
Athens, GA 30602

The American Association for Vocational Instructional Materials (AAVIM) is a nonprofit national institute.

The institute is a cooperative effort of universities, colleges and divisions of vocational and technical education in the United States and Canada to provide for excellence in instructional materials.

Direction is given by a representative from each of the states, provinces and territories. AAVIM also works closely with teacher organizations, government agencies and industry.

The work presented herein was performed by the National Center for Research in Vocational Education on behalf of the Consortium for the Development of Professional Materials for Vocational Education. Sponsors and members of the Consortium for 1980-1981 included the following states and/or cooperating agencies: the Florida Department of Education, Division of Vocational Education, and Florida International University, Division of Vocational Education; the Illinois State Board of Education, Department of Adult, Vocational, and Technical Education, and Southern Illinois University at Carbondale; the New York State Education Department, Office of Occupational and Continuing Education; the North Carolina Department of Public Instruction, Division of Vocational Education; the Ohio State Department of Education, Division of Vocational Education; and the Pennsylvania Department of Education, Bureau of Vocational Education, and Temple University, Department of Vocational Education. The opinions expressed herein do not, however, necessarily reflect the position or policy of any of the sponsors, and no official endorsement by them should be inferred.

FOREWORD

The need for competent administrators of vocational education has long been recognized. The rapid expansion of vocational education programs and increased student enrollments have resulted in a need for increasing numbers of vocational administrators at both the secondary and postsecondary levels. Preservice and inservice administrators need to be well prepared for the complex and unique skills required to successfully direct vocational programs.

The effective training of local administrators has been hampered by the limited knowledge of the competencies needed by local administrators and by the limited availability of competency-based materials specifically designed for the preparation of vocational administrators. In response to this pressing need, the Occupational and Adult Education Branch of the U.S. Office of Education, under provisions of part C--Research of the Vocational Education Amendments of 1968, funded the National Center for a scope of work entitled "Development of Competency-Based Instructional Materials for Local Administrators of Vocational Education" during the period 1975-77. That project had two major objectives:

1. To conduct research to identify and nationally verify the competencies considered important to local administrators of vocational education.
2. To develop and field test a series of prototypic competency-based instructional packages and a user's guide. One hundred sixty-six (166) high priority competencies were identified and six prototypic modules and a user's guide were developed, field tested, and revised.

Although six modules had been developed, many more were needed to have competency-based materials that would address all the important competencies that had been identified and verified. In September 1978 several states joined with the National Center for Research in Vocational Education to form the Consortium for the Development of Professional Materials for Vocational Education. Those states were Illinois, Ohio, North Carolina, New York, and Pennsylvania. The first five states were joined by Florida and Texas later in the first year. The first objective of the Consortium was to develop and field test additional competency-based administrator materials of which this guide is one product.

Several persons contributed to the successful development and field review of this guide to vocational-technical education program alternatives. Lois G. Harrington, Program Associate, assumed the major responsibility for reviewing the literature and for preparing the actual manuscript. Recognition also goes to the two consultants who helped conceptualize the guide and prepared draft materials for the manuscript: Carol A. Fought, Administrative Assistant to the President, Columbus Technical Institute, Columbus, Ohio; and Donna H. Keirsbilck, Director of Occupational Education, Islip Career Center, Oakdale, New York.

Acknowledgement is given to the several voluntary field reviewers who provided critiques of the guide and suggestions for its improvement.

Credit goes to Lois G. Harrington, Program Associate, who helped to refine the guide for publication after field review; and to Robert E. Norton, Consortium Program Director, for providing program leadership and content reviews. Thanks go to Ferman B. Moody, Associate Director for Personnel Development, for his administrative assistance.

Appreciation is also extended to Calvin Cotrell, Carroll Curtis, James Haire, George Kosbab, Helen Lipscomb, Aaron J. Miller, Dominic Mohamed, Robert Mullen, James Parker, Dale Post, and Wayne Ramp for their service as state representatives, state department contacts, and field-test coordinators; and to the other teacher educators and local administrators of vocational education who used the guide and provided valuable feedback and suggestions for its improvement. Last, but certainly not least, thanks and credit are due Deborah Linehan, Consortium Program Secretary, for her patience and expert skill in processing the many words necessary to make this guide a quality document.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

CONTENTS

INTRODUCTION

PART ONE: VOCATIONAL EDUCATION

I. What is Vocational Education?. 5
- Definition of Vocational Education 5
- Goals of Vocational Education. 7
- Principles of Vocational Education 8
- Organization of Vocational Education 10

PART TWO: ALTERNATIVE PROGRAMS

II. Integrated Occupational Experience 19
- Cooperative Education. 20
- Capstone Experiences 24
- On-the-Job Training. 24
- Apprenticeships. 25
- Clinical Experiences 27
- Internships. 28
- Shadowing. 29

III. Supplemental/Remedial Programs 31
- Supplemental Program Topics. 31
- Remedial Program Topics. 31
- Program Structures 31
- Implications for Programs and Services 33

IV. Special Needs Programs and Services. 35
- Programs/Services. 36
- Training 41
- Implications for Program Planning. 42

V. Competency-Based Education 43
- Essential Elements and Desirable Characteristics of CBE. 43
- Differences Between CBE and Conventional Programs. . . . . 4[illegible]
- Advantages of CBE. 46
- Implications for Program Planning. 47

VI. Vocational Student Organizations 51
- Program Concerns 54

VII. Adult/Continuing Education Programs. 55
- Program Subjects 56
- Program Delivery Methods 57
- Program Marketing. 58
- Program Personnel. 59

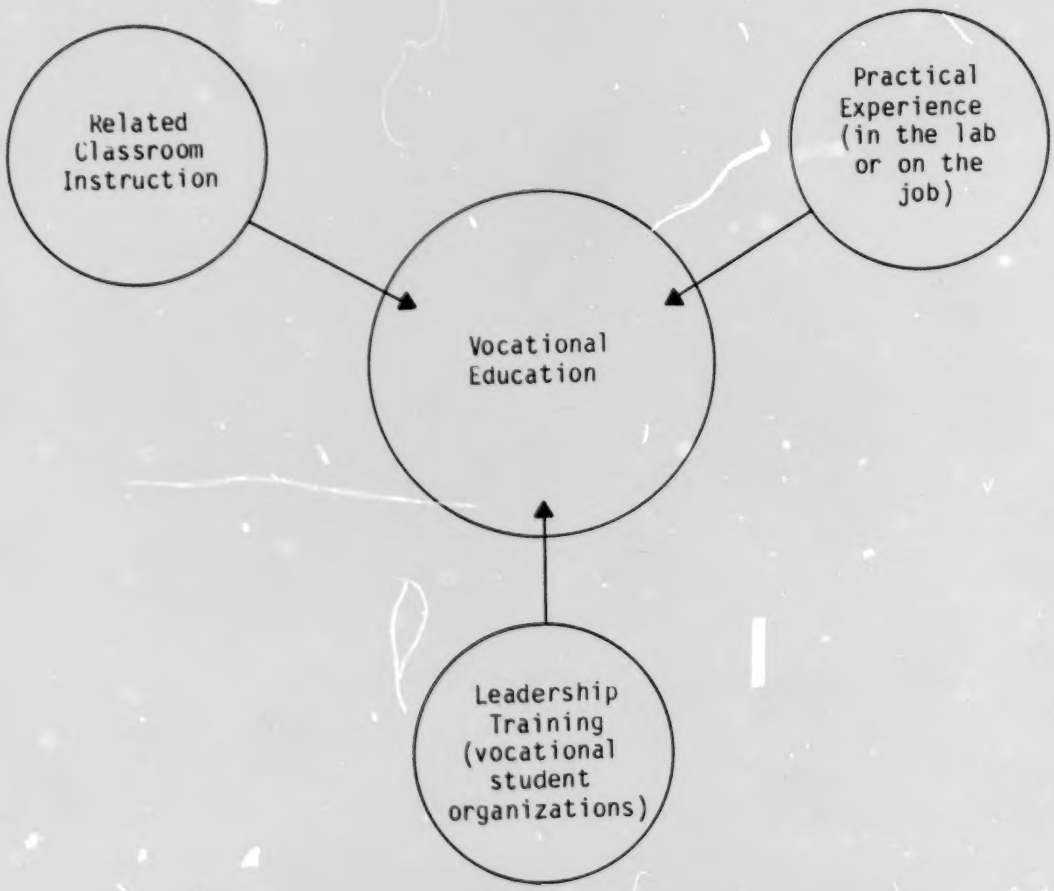
VIII. Program Planning: Selection of Alternatives 61

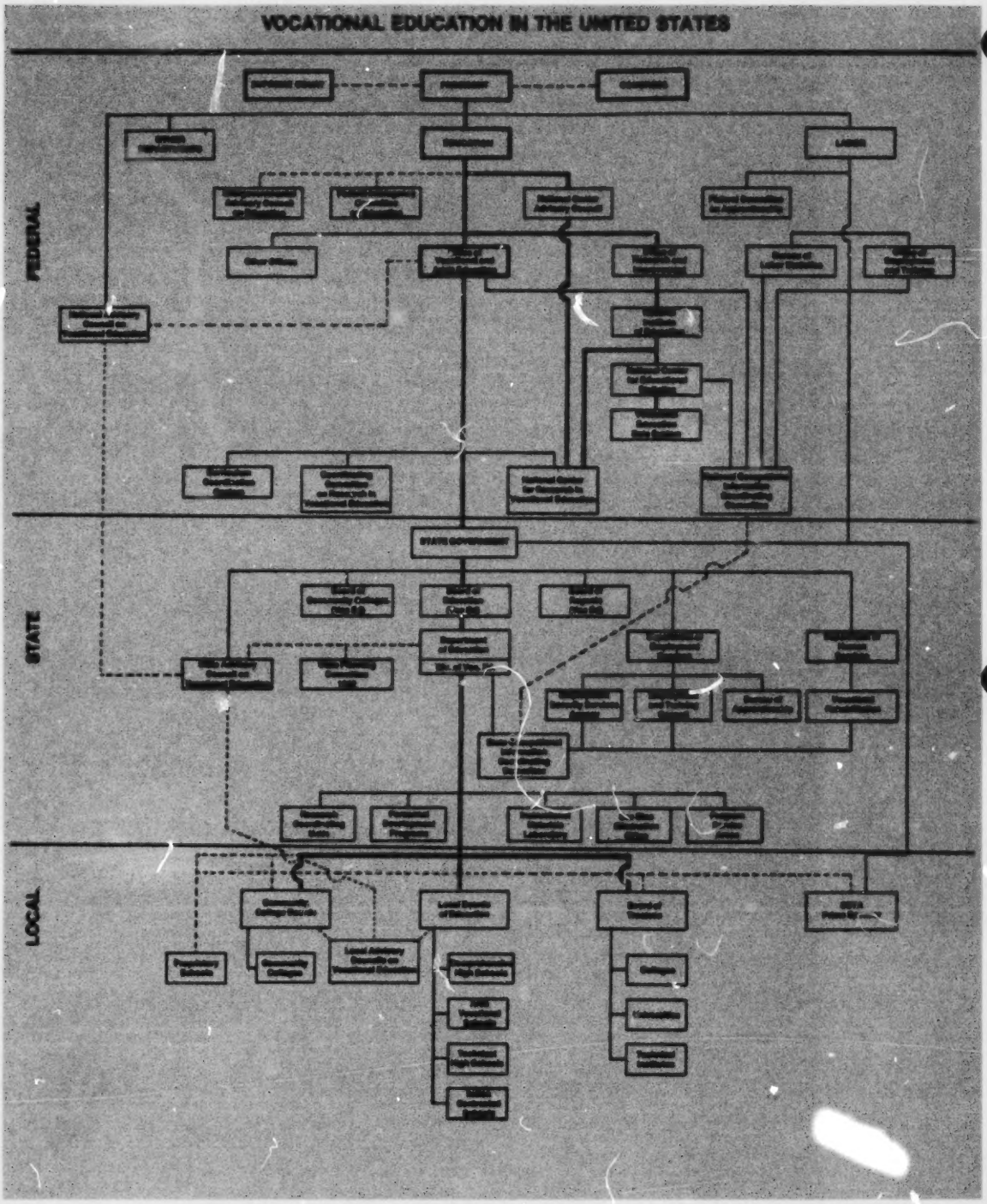
PART THREE: ACTIVITY

INTRODUCTION

This guide is intended as a supplement to the Competency-Based Vocational Education Administrator Module Series. It was developed to serve two very specific needs. First, one of the skills covered by two of the modules in the series involves the development of local plans for vocational education. In order to develop these plans, administrators must be informed about what program options are available to them. This guide provides an overview of program alternatives. Second, an overview would also be useful to those administrators who come from general education backgrounds and have jurisdiction over vocational programming (e.g., in a comprehensive high school or postsecondary institution).

It is for these types of audiences that this guide has been developed. It does not pretend to provide a thorough coverage of the content generally provided in courses on the foundations of, philosophy of, and legislation relating to vocational education. It is intended to provide a brief overview of the typical vocational programs available and the general kinds of requirements involved that would have implications for program planning and budgeting.


Related Classroom Instruction
Practical Experience (in the lab or on the job)
Vocational Education
Leadership Training (vocational student organizations)


VOCATIONAL EDUCATION IN THE UNITED STATES
FEDERAL
STATE
LOCAL

PART ONE

VOCATIONAL EDUCATION

Chapter I

WHAT IS VOCATIONAL EDUCATION?

In order to put vocational education program alternatives in perspective, it is necessary to first define what is meant by vocational education. At the secondary level, the terms used are generally the following: vocational education, vocational-technical education, or occupational education. Preference for which term is used varies from state to state, and each state usually has strong, rational reasons for preferring one term over another. At the post-secondary level, the terms technical, occupational, and vocational education are commonly used.

This kind of education received major impetus in 1917 through the Vocational Education Act of 1917, commonly called the Smith-Hughes Act. This Act was designed "to provide for the promotion of vocational education; to provide for cooperation with the states in the promotion of such education in agriculture and the trades and industries; to provide for cooperation with the states in the preparation of teachers of vocational subjects; and to appropriate money and regulate its expenditure." Subsequent legislation--Vocational Education Act of 1963, Vocational Education Amendments of 1968, Education Amendments of 1976--continued federal support of vocational education.

Recognizing the legitimacy of terms other than vocational education, let us try to define the concept using that one term to simplify the discussion.

Definition of Vocational Education

The question is often asked, "What distinguishes vocational education from general education?" One way of expressing it is that education is vocational depending on the intent of the learner. If the learner intends to use the education to earn a living in an occupation, the education is vocational. The study of Latin may be vocational if the student intends to become a teachers of classic literature. Conversely, a course in computer programming would be a part of general education for a student who wanted to learn something about this subject in order to be a more intelligent citizen in a technological society. A formal definition of vocational education might be stated thus:

> Vocational education includes the knowledge, skills, and attitudes of a particular occupation, taught and learned in their practical and proper application to the work.
>
> OR
>
> Vocational education is designed to improve the efficiency of an individual in a specific occupation. General education is of value

to an individual regardless of the occupation that he or she is to follow.

In that sense, there is no clear and rigid distinction between vocational education and general education. The difference is not that of subject matter, but one of objectives and focus. Each in its way is essential as preparation for a productive and rich life.

However, for operational and funding purposes, there is a clear-cut entity that is vocational education. According to the definition provided in the Vocational Education Act of 1963, the term vocational education means--

> . . . organized educational programs which are directly related to the preparation of individuals for paid and unpaid employment, or for additional preparation for a career requiring other than a baccalaureate or advanced degree . . .

More specifically, an area vocational education school is defined as follows:

> . . . (1) a specialized high school used exclusively or principally for the provision of vocational education to persons who are available for study in preparation for entering the labor market, or (2) the department of a high school exclusively or principally used for providing vocational education in no less than five different occupational fields to persons who are available for study in preparation for entering the labor market, or (3) a technical or vocational school used exclusively or principally for the provision of vocational education to persons who have completed or left high school and who are available for study in preparation for entering the labor market, or (4) the department or division of a junior college or community college or university operating under the policies of the State board and which provides vocational education in no less than five different occupational fields leading to immediate employment but not necessarily leading to a baccalaureate degree, if it is available to all residents of the state or an area of the State designed and approved by the State board, and if, in the case of a school, department, or division described in (3) and (4), it admits as regular students both persons who have completed high school and persons who have left high school.

Since the '70s, the concept of career education has assumed increased importance. Career education is a broader term than vocational education. The following functional definition of career education was accepted by the Chief State School Officers in 1974.

> Career education is essentially an instructional strategy, aimed at improving educational outcomes by relating teaching and learning activities to the concept of career development. Career education extends the academic world to the world of work. . . . A complete program of career education includes awareness of self and the world of work, broad orientation to occupations. exploration of selected

clusters, career preparation, an understanding of the economic system of which jobs are a part, and placement for all students.[1]

Most educators seem to agree that career education (1) should be experienced by all students from kindergarten through adult education, (2) involves more than simply skills training, and (3) emphasizes preparation for work. In this sense, vocational education is a part of career education and serves in the career preparation phase of students' development. Thus, the goals of career education can only be fulfilled by a strong and expanded system of vocational education available to all who need it.

Goals of Vocational Education

The broad goals of vocational education are generally agreed to be the following:

- To meet the human resource needs of society
- To increase the options or choices available to each student
- To serve as a motivating force to enhance learning of all types

In addition to these basic goals common to all of vocational education, each occupational service area and each course has its own goals and objectives.

The oldest and most widely accepted goal of vocational education is to provide a means for meeting the human resource needs of society. Always a major effort in every society, providing trained personnel has become increasingly difficult as the rate of change in human resource needs has accelerated. More formal training is required as the level of technology advances and as the need for unskilled workers declines while the need for semiskilled and skilled workers rises.

Automation and mechanization are selective, and human resources forecasting is not a highly accurate science, so imbalances in the number of trained workers needed in specific occupations remains a constant challenge. Vocational educators are meeting this challenge by devising new occupational programs and continually revising existing ones. Recent federal legislation has required vocational educators to expend additional effort on training certain segments of society such as adults, the handicapped, and the disadvantaged. Training workers for the new postindustrial society is a great and still not completely fulfilled function of vocational education.

The second broad goal of vocational education is that of increasing the available options or choices for each individual. Greater freedom of choice permits an enriched and varied life--one more adaptable to personal development and societal change. Individual options are increased by such factors

---

1. Sidney P. Marland, Jr., Career Education: A Proposal for Reform (New York, NY: McGraw-Hill Book Co., 1974), p. 105.

as verbal ability, physical ability, manipulative skill, mental and physical health, and income above the subsistence level. An individual's options are decreased or limited by such things as illiteracy, prejudice, social isolation, handicaps, and lack of job training. A major goal of American society is to minimize those factors that limit individual options and to provide people with experiences that give them increased life choices.

Vocational education provides these personal development opportunities in a number of ways. Vocational programs offer job training, enriched general education, and opportunity for increased income and occupational advancement. Vocational student organizations offer opportunities for leadership and social development. Vocational education prepares people for "career ladders" that lead from lower to higher positions with increased opportunities and greater rewards (e.g., from carpenter's helper to journeyman carpenter, clerk to legal secretary, nurse's aide to registered nurse). It also trains individuals so they are able to shift from one career to another to take advantage of employment opportunities and allow for personal growth.

The third, and possibly least understood, of the goals of vocational education is that which suggests that the study of vocational education can help interpret general education to vocational students. As students progress through their vocational programs, many begin to see the need for the general education that they had previously rejected. As a result of vocational education, students can perceive the relevance of the basic academic skills of reading, writing, and computation and the concepts of science, economics, and government.

This process may occur naturally, with little specific help from the vocational teacher. Often, however, the perceptive teacher can assist students in understanding how the skills of general education are important--not only for an occupation but also for life.

Principles of Vocational Education

A principle is an accepted rule of action--a fundamental doctrine or tenet from which others are derived. A number of the principles of vocational education were ennunciated early in the movement and have stood the test of time. In The Philosophy for Quality Vocational Education Programs, Melvin Barlow selected a number of principles of vocational education that were first stated in the period between 1906 and 1917. These nine principles are as follows:

Citizenship. Vocational education supports, fosters, and promotes good citizenship. This concept of the productive worker as a law-abiding, tax-paying, stable member of society was embedded in the early rationale for vocational education. In the process of extending the educational system upward through the high school, proponents of vocational education moved to encourage occupational preparation as a part of the citizenship training program.

General education. Thorough grounding in the basic general studies was regarded as a foundation upon which vocational education could build. As the education requirements for employment have risen through the years, the need for educational achievement has become even more essential. Vocational education is designed to promote and enhance general education and personal cultural growth.

Clientele. An early vocational publication states that schools should be "open to all; sex, creed, color, and nationality should not debar anyone." This has been reemphasized in recent vocational legislation, which states that vocational education is intended for "all people of all ages in all communities."

Theory and practice. The concept of combining the "theory of doing" and the "practice of doing" in the curriculum was a modern idea in 1908. It is still a valid concept today. The intent of instruction was to produce an exceptional craftsperson who could advance to positions of increasing responsibility. Provision for theory and practice in vocational education makes for efficient learning and provides a strong foundation for continuing occupational development.

Cooperation. The concept of cooperation among employer, employee, and educator was acknowledged as indispensable to high-quality vocational education. Advisory committees and community interaction committees have emerged from such ideas.

A national problem. Because it is somewhat difficult for states and local school districts to develop vocational education programs and because there is a need for a highly trained labor force, vocational education was thought to be a national responsibility--one requiring federal funding and developed through federal legislation. Through the years, the concept of vocational education as a national concern has not diminished. The demands for an educated labor force have become stronger, the nation's workers have become increasingly mobile, and the need for vocational education in every state has become more acute.

Individualized instruction. The concept of individualized instruction has long been considered to be an integral part of vocational education. For example, as early as 1908 the view was expressed that "most of the instruction must be individual rather than group to adapt it to the varied abilities and shop experiences of the pupil." In recent years, individualized instruction has received great emphasis at every level of education.

Vocational instructors. An important qualification for vocational instructors was, and still is, extensive experience in the occupation. It is also desirable that teachers have wide-ranging personal skill in practical application.

Class distinction. Vocational education is opposed to the promotion of class distinction. An early principle of vocational education leaders was to

develop a training system in which students were not divided by class lines or social distinctions.[2]

These are some of the basic principles upon which contemporary vocational education is built. To maintain its vitality, the system must allow for changes in the industrial, technological, agricultural, social, and economic structure of our society. This has been done by reinterpreting the proven principles of vocational education in the light of societal changes.

One way this reinterpretation takes place is through federal vocational legislation--from the landmark Smith-Hughes Act of 1917 through subsequent major vocational bills. In 1917 for example, when the first vocational legislation was developed, vocational education was conceived as a program for high school students and employed adults. At that time it would have been absurd to propose a postsecondary program, since only 20 percent of the age group attended high school and an even smaller proportion went on to advanced training. Over the years, as the number of students increased and society needed more highly trained people, the need for vocational education at the postsecondary level became evident.

Note that the principle of preparing people for employment is unchanged, but the principle was reinterpreted to meet changing needs by increasing the number of programs and making them available at different levels.

It follows that, as new interpretations of vocational principles evolve, new ways of implementing these principles must be developed. Evolution of philosophy, however gradual, is ultimately reflected in changed action. The quality of vocational education is directly related to the way in which teachers and administrators deal with the necessary change. They must understand the nature of the reinterpreted principles and carefully match the programs they implement to contemporary principles of vocational education.

Organization of Vocational Education

As indicated in prior sections, vocational education is provided primarily at two levels: secondary and postsecondary. Institutions providing this type of training generally are identifiable by one of the following names:

- Comprehensive high school
- Area vocational school
- Vocational-technical school
- Technical institute

---

2. Melvin F. Barlow, ed., The Philosophy for Quality Vocational Education Programs, Fourth Yearbook of the American Vocational Association (Washington, DC: American Vocational Association, 1974), pp. 19-22.

- Cosmetology school
- Barber school
- Trade school
- Hospital school
- Flight school
- Junior college
- Community college

These institutions may be public or private (proprietary--for-profit, independent nonprofit, or supported by a religious group).

Public institutions can be characterized as follows:

- They are funded by tax monies coming from governmental sources at all levels (primarily local and state; some federal).
- They are governed by boards that are directly elected by the citizenry or appointed by elected officials. The board's power is limited to the authority granted to it by the state.

Private institutions can be characterized as follows:

- They derive the major part of their funding from tuitions charged to students, supplemented by private gifts and endowments.
- They are governed by boards that are, in most cases, self-perpetuating; i.e., new board members are appointed by current board members. The board's autonomy is limited by the charter issued to the institution by the state.

The wide range of vocational programs typically offered includes the following (see samples 1 and 2 for more detail):

Secondary	Postsecondary
Agriculture	Allied Health
Home Economics	Business
Trade and Industrial	Public Services
Health Occupations	Engineering
Business/Office	Technical and Industrial
Marketing and Distributive Education	Agriculture
Industrial Arts	
Technical	

A word about home economics and industrial arts, and whether or not they are part of vocational education. This question is perhaps best explained in a text by Roy Roberts as follows:

Home economics. Homemaking education in the secondary school may be classified as comprehensive (general) or occupational (vocational). The purpose of comprehensive homemaking education, frequently referred to as a nonvocational practical arts subject area, is to interpret those aspects of life that have to do with the problems and activities of the home, without reference to their vocational significance. These courses may be placed on various grade levels in the junior and senior high schools and are designed for all students, regardless of their vocational choices. Occupational home economics (most prevalent at the postsecondary level) is centered on preparing students to use skills traditionally associated with the home (sewing, cooking, child care) in the world of work: the operation of a day-care center, industrial sewing, food services.[3]

The controversy stems from the notion that such a division or classification implies that the role of homemaker is not a legitimate occupation--a notion that has come under a great deal of legitimate fire in recent years.

Industrial arts. Some confusion has existed for many years with reference to the relationship between industrial arts and vocational industrial education. Some general educators maintain that there is little difference between industrial arts and vocational industrial education and that the trend is for these two subjects to become more and more alike. Vocational educators and industrial arts educators, on the other hand, insist that the two programs are different and should remain distinct and separate programs. These conflicting points of view are due to a number of causes. First, both types of courses use similar tools, equipment, and materials, and in the smaller schools the same shop is used for both programs. Then, too, the fact that federal aid is provided for vocational industrial education and not for industrial arts has led some educators to make less differentiation between the two courses than is justified in order to enroll larger numbers of students in the federally aided courses.

The distinction between industrial arts and vocational industrial education is one of purpose. Industrial arts is included in school curriculums primarily to serve the nonoccupational needs common to a majority of the students. The objectives of industrial arts are those of general education and are concerned with habits, attitudes, appreciations, leisure time, home mechanics, and consumer knowledge. While some skills useful in a vocation are frequently acquired in industrial arts, this acquisition is incidental and secondary to the major purposes of industrial arts. The purpose of vocational industrial education is to enable workers and prospective workers in industry to acquire vocational efficiency in a chosen occupation.[4]

---

3. Adapted from Roy W. Roberts, Vocational and Practical Arts Education: History, Development, and Principles, Second Edition (New York, NY: Harper and Row Publishers, 1965), pp. 264, 265.

4. Roberts, Vocational and Practical Arts Education, pp. 427, 428.

SAMPLE 1

TYPICAL SECONDARY PROGRAMS

Health Occupations

Dental assisting
Environmental health
Medical laboratory assisting
Practical nursing
Nursing assistance

Industrial Arts

Wood shop
Metal shop

Marketing and Distributive Occupations

Advertising services
Automotive
Finance and credit
Food distribution
Food service
General merchandise
Recreation and tourism
Transportation

Office Occupations

Accounting
Business data processing
Filing
General office clerical
Information communication
Office machines
Stenographic and secretarial
Typing
Word processing

Trades and Industrial Occupations

Air conditioning
Aircraft maintenance
Appliance repair
Automobile mechanics
Automotive body and fender
Barbering
Business machine maintenance
Carpentry
Commercial art
Commercial photography
Construction and maintenance
Communications
Cosmetology
Diesel mechanic
Drafting and design
Electrical
Electronics
Graphic arts
Instrument maintenance and repair (e.g., watchmaking)
Lineman
Machine shop
Maritime
Masonry
Metalworking
Mining
Painting and decorating
Plastering
Plumbing and pipefitting
Pumping plants
Sheet metal
Shoe repair
Small engine repair
Stationary energy sources
Upholstering
Welding and cutting
Woodworking

Agriculture

Agriculture production and processing
Agriculture supplies/services
Agricultural mechanics
Agriculture products
Ornamental horticulture
Agricultural resources

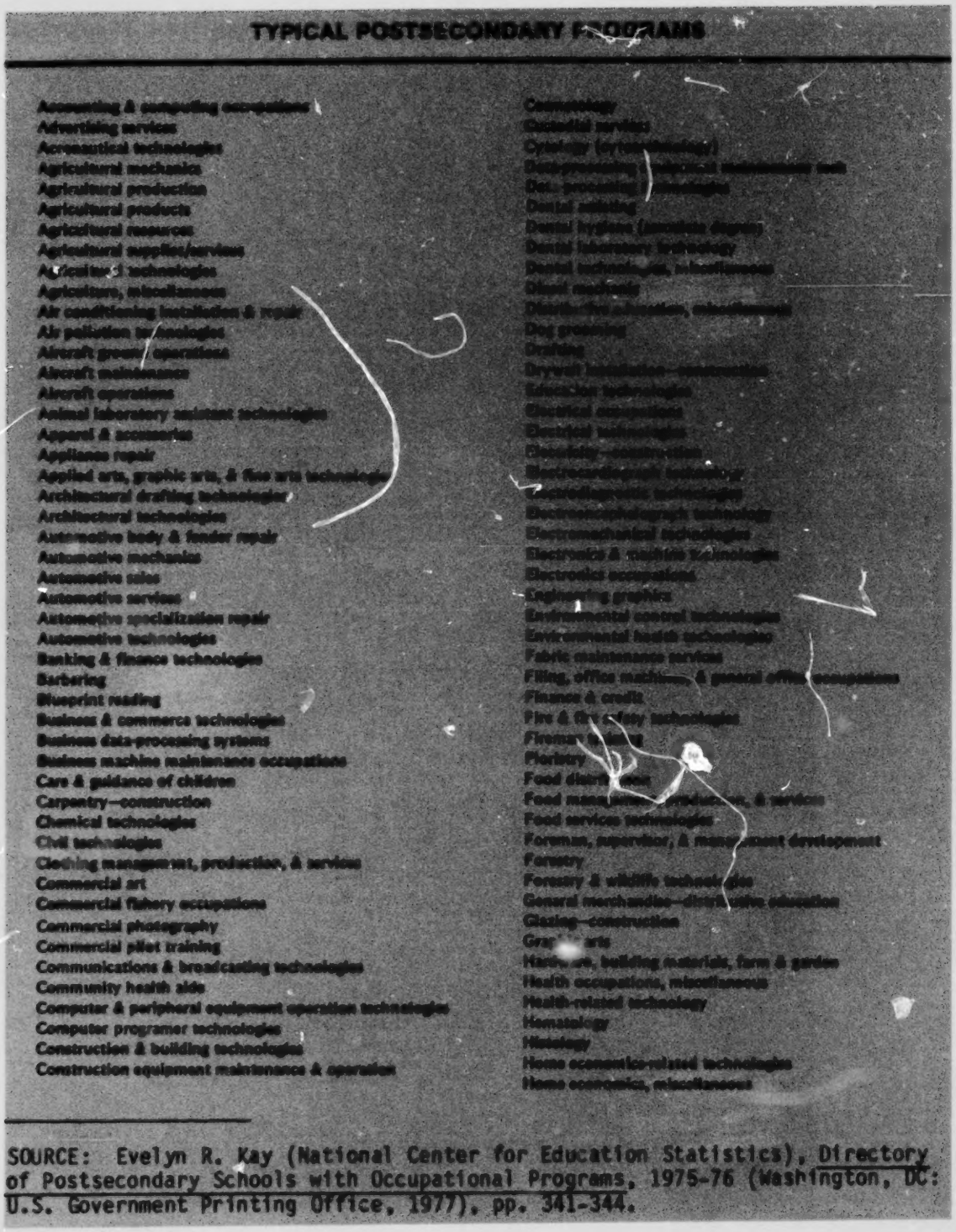
Comprehensive Home Economics

Child development
Clothing and textiles
Consumer education
Family health
Family relations
Foods and nutrition
Home management
Housing and home furnishings

Occupational Home Economics

Care and guidance of children
Clothing management, production, and services
Food management, production, and services
Home furnishings, equipment, and services
Institutional and home management and supporting services

SAMPLE 2



TYPICAL POSTSECONDARY PROGRAMS

Accounting & computing occupations
Advertising services
Aeronautical technologies
Agricultural mechanics
Agricultural production
Agricultural products
Agricultural resources
Agricultural supplies/services
Agricultural technologies
Agriculture, miscellaneous
Air conditioning installation & repair
Air pollution technologies
Aircraft ground operations
Aircraft maintenance
Aircraft operations
Animal laboratory assistant technologies
Apparel & accessories
Appliance repair
Applied arts, graphic arts, & fine arts technologies
Architectural drafting technologies
Architectural technologies
Automotive body & fender repair
Automotive mechanics
Automotive sales
Automotive services
Automotive specialization repair
Automotive technologies
Banking & finance technologies
Barbering
Blueprint reading
Business & commerce technologies
Business data-processing systems
Business machine maintenance occupations
Care & guidance of children
Carpentry—construction
Chemical technologies
Civil technologies
Clothing management, production, & services
Commercial art
Commercial fishery occupations
Commercial photography
Commercial pilot training
Communications & broadcasting technologies
Community health aide
Computer & peripheral equipment operation technologies
Computer programer technologies
Construction & building technologies
Construction equipment maintenance & operation
Cosmetology
Custodial services
Cytology (cytotechnology)
Data-processing machine maintenance
Data processing technologies
Dental assisting
Dental hygiene (associate degree)
Dental laboratory technology
Dental technologies, miscellaneous
Diesel mechanics
Distributive education, miscellaneous
Dog grooming
Drafting
Drywall installation—construction
Education technologies
Electrical occupations
Electrical technologies
Electricity—construction
Electrocardiograph technology
Electroencephalograph technology
Electromechanical technologies
Electronics & electronics technologies
Electronics occupations
Engineering graphics
Environmental control technologies
Environmental health technologies
Fabric maintenance services
Filing, office machines, & general office occupations
Finance & credit
Fire & fire safety technologies
Floristry
Food distribution
Food management, production, & service
Food services technologies
Foreman, supervisor, & management development
Forestry
Forestry & wildlife technologies
General merchandise—distributive education
Glazing—construction
Graphic arts
Hardware, building materials, farm & garden
Health occupations, miscellaneous
Health-related technology
Hematology
Histology
Home economics-related technologies
Home economics, miscellaneous

SOURCE: Evelyn R. Kay (National Center for Education Statistics), Directory of Postsecondary Schools with Occupational Programs, 1975-76 (Washington, DC: U.S. Government Printing Office, 1977), pp. 341-344.

Home furnishing, equipment, & services
Home furnishings management & sales
Hotel & lodging management
Industrial atomic energy occupations
Industrial marketing
Industrial technologies
Information communication
Respiratory therapy
Institutional & home management & services
Instrument maintenance & repair occupations
Instrumentation technologies
Insurance managing & selling
International trade
Keypunch operator
Laboratory technologies
Law enforcement training
Leatherworking
Legal assistant
Library assistant technologies
Machine shop occupations
Machine tool operations
Maritime occupations
Marketing & distribution technologies
Masonry—construction
Materials support occupations
Mechanical & engineering technologies
Medical assisting (physician's office)
Medical emergency technician
Medical or biological laboratory assistant technologies
Medical record technologies
Mental health technologies
Metallurgical technologies
Metallurgy occupations
Metalworking occupations, miscellaneous
Mortuary science
Natural science technologies
Nuclear medical technology
Nuclear technology
Nursing assistant (aide)
Nursing-associate degree
Nursing—R.N. (less than 4 years)
Nursing, other
Nursing, practical (vocational)
Occupational therapy
Oceanographic technology
Office occupations, miscellaneous
Optical technologies
Ornamental horticulture
Painting & decorating—construction
Performing artists
Personal services technologies
Personal services—distributive education
Personal services—trades & industry
Personnel, training, & related occupations
Petroleum products—distributive education
Petroleum technologies
Photography technologies
Physician's assistant
Physical therapy
Plastering—construction
Plastics occupations
Plumbing & pipefitting—construction
Police science technologies
Printing & lithography technologies
Psychiatric aide
Public administration & management technologies
Public service occupations
Quantity food occupations
Radiation therapy
Radio/TV repair
Radiologic occupations, miscellaneous
Radiologic technology (X-ray)
Real estate managing & selling
Recreation & social work technologies
Recration & tourism
Refrigeration engineer
Rehabilitation services, miscellaneous
Retail trade
Roofing—construction
Sanitation & public health inspection technologies
Scientific data-processing technologies
Small engine repair
Stationary energy sources occupations
Stenographic & secretarial occupations
Supervisory & administrative management
Surgical technologies
Systems analyst
Teacher's assistant
Technical education, miscellaneous
Textile production & fabrication
Tool & diemaking
Trade & industrial occupations, miscellaneous
Transportation & public utility technologies
Transportation services
Truck driving
Typing & clerical occupations
Upholstering
Veterinarian assistant
Water & waste water technologies
Welding & cutting
Welding technologies
Wholesale trade
Woodworking

NOTES

PART TWO

ALTERNATIVE PROGRAMS

Chapter II

INTEGRATED OCCUPATIONAL EXPERIENCE

The ultimate goal of vocational (or occupational or technical or career) education is the preparation of students for the world of work. Thus, it is logical that one alternative (or supplement) to classroom and laboratory instruction is on-the-job or field experience. A variety of such experiences are available, ranging from short-term experiences involving observation to long-term experiences involving employment and a wage. For such experiences to become a reality, the staff and administration at the secondary or post-secondary school must develop and maintain cooperative, functional relationships with businesses, industries, and labor--which should be part of the role of vocational educators regardless. Preparation of students for the world of work is only one benefit. Often, arranging these experiences also opens up entry-level employment opportunities with employers who might not have planned to hire vocational-technical students.

What is critical about such experiences is suggested in the word integrated. These occupational experiences may allow the student to earn while learning, but the financial gain, if any, is not the key consideration. The occupational experience must be related in some way to the student's career goals. In addition, in-school experiences should be related to what is occurring on the job. In other words, the occupational experience must be integrated into the student's total educational program.

This stress on the need for integration is crucial because there are occupational experiences that are not educational in purpose. These experiences are typically called work-study, work experience, or work-release. Designed primarily to provide financial assistance to students to enable them to remain in school, such occupational experiences are not tied to students' career goals, involve no related instruction, and are not structured by any formal contract or training plan.

At the secondary and postsecondary levels, the primary types of integrated occupational experience programs are the following:

- Cooperative education
- Capstone experiences
- On-the-job training (OJT)
- Apprenticeships
- Clinical experiences
- Internships
- Shadowing

Cooperative Education

Cooperative (co-op) education is a method of instruction that involves and unites the secondary or postsecondary school and employers in a cooperative educational effort. The total educational program has four parts, which should be carefully coordinated and supervised to assist the student in gaining occupational competence. Students take the general education courses necessary for graduation, such as English or history, and also take a cooperative related-instruction class that relates to their career objective and their on-the-job learning experiences. They are employed at a part-time job where they participate in learning experiences that develop and refine the occupational competencies needed to achieve their career objectives. Finally, especially at the secondary level, they often also participate in the activities of an appropriate vocational student organization. The benefits of co-op education are listed in sample 3.

Cooperative education has six characteristics that distinguish it. Students in the cooperative program (1) participate in learning experiences based on a specified career objective, (2) work part-time in a training station selected on the basis of that same career objective, (3) receive pay and school credit for their on-the-job training, (4) have regular school supervision, (5) participate in this program for at least one year, and (6) take in-school courses that relate directly to their on-the-job training. To be a "cooperative" program, the program must meet all six criteria.

Two additional components are important to the co-op program. First, there must be a written training agreement that clarifies program policies and procedures, specifies that a training plan will be followed, and outlines the specific responsibilities of each party involved (e.g., school, employer, student, and parent). This agreement must be signed by each party. Second, there must be a cooperatively developed, written training plan that specifies the competencies to be developed by the student and where the competencies will be developed (i.e., at the training station, in the classroom, or both).

There are basically three types of cooperative education. In the first type, the institution has a separate program for each service area. In this case, for example, there would be a cooperative program at the secondary level for (1) business and office education, (2) distributive education, (3) home economics, (4) trade and industrial education, (5) agriculture, and (6) health occupations. An institution may not have all six programs, but the programs it does have are each geared to a single area.

The second type is the combination or interrelated approach. In institutions where staff, student interest, or employment opportunities are limited, a single cooperative program may exist. This single program would be geared to handle students from various service areas. Two such programs are Diversified Cooperative Training (DCT) and Cooperative Occupation Education (COE).

The third type, offered at the secondary level, is the special purpose program geared to meet the special needs of the physically handicapped; mentally retarded; or economically, socially, academically, or culturally

SAMPLE 3

BENEFITS OF COOPERATIVE EDUCATION

Students can—

- discover their true interests and abilities, test their aptitudes
- make occupational choices
- understand employment opportunities and responsibilities
- better understand and appreciate the world of work
- develop and refine occupational competencies necessary to secure employment and advance in their chosen occupation
- develop skills in working with others
- acquire specialized occupational competencies which could not be acquired within the school environment
- see the relevance of in-school learning; understand the meaning and purpose of the theoretical ideas presented in school
- be better motivated toward work in all school subjects
- see the relationship between school and work
- make an easier adjustment from the role of student to the role of employee
- earn while they learn

School can—

- provide an enlarged learning facility via use of community resources
- provide broader instruction with these enlarged facilities; expand the curriculum
- evaluate its program against the actual skills needed for employment—actual employment trends
- decrease the dropout rate by better meeting students' career goals
- develop and maintain a better relationship with business and industry and the community
- become more responsive to the employment needs of the community
- provide more individualized instruction

Employers can—

- train potential full-time employees in their own plants
- better ensure that the in-school instruction meets their employment needs since they are more a part of the school program
- obtain better qualified part-time employees who are receptive to instruction, motivated, and interested
- get a more direct return from their school tax dollars
- get training assistance
- render an important public service

Community gains—

- young people capable of being more productive citizens
- young people trained for local labor market
- young people who have been introduced to local employment and thus may settle in the home community
- economic growth by having a ready source of trained workers
- better school-community relations
- a catalyst for promoting adult and evening classes
- a catalyst for developing a unified community training program

disadvantaged youth. When the cooperative method of instruction is employed for the disadvantaged student, the major emphasis is on work adjustment and attitudinal changes. The disadvantaged student often possesses little or no occupational skill and/or may be alienated from school and/or may lack the ability to relate to adults and work.

Cooperative programs are supervised by teacher-coordinators. The teacher-coordinator's responsibilities include the following:

- Helping students identify their career objectives and determining whether these objectives could be met by the cooperative program
- Contacting local employers, evaluating their training potential, and convincing them to employ and train students
- Placing students in jobs on the basis of the students' career objectives
- Working with students and employers to plan the students' total vocational-technical instructional program
- Visiting the students on the job to supervise their progress and to assist the employers in their training endeavors
- Providing the in-school related instruction
- Usually, serving as a sponsor to a vocational student organization
- Evaluating their programs on a continual basis

The on-the-job training is provided at a training station. The training station is the firm, business, or industry that hires the students (sometimes referred to as student-learners or student trainees). Within this firm, there is a single individual who has agreed to be responsible for the student's training. This individual is called the on-the-job instructor (sometimes referred to as the job supervisor or training sponsor).

The scheduling of the cooperative program is another concern. There are a variety of scheduling possibilities open to a school desiring to initiate a successful program, including one or all of the following:

Half-day mornings/half-day afternoons--This schedule provides students with the opportunity to work in the morning or afternoon and to attend school in the opposite time slot. Thus, two students can be trained on one job; while one student attends school in the morning, the other is at the training station. In the afternoon, the schedule is reversed.

Half-day afternoons--This schedule provides for all co-op students to attend classes in the morning and to work at the training station in the afternoon.

Alternate blocks of time (e.g., five weeks or ten weeks or six months)--With this schedule, each student has the opportunity to attend classes for an extended block of time and to get occupational experience for the

next block. While one group of students is in school for that period, another group is on the job. At the end of that period, students reverse positions.

Summer scheduling--Because of the nature of certain kinds of employment--such as agriculture, conservation, food services, resort and hotel housekeeping services, waiter-waitress training, health occupations, building trades, and others--it is sometimes desirable to schedule the occupational experience phase of the cooperative program during the summer months. This may be part of a continuing-school-year program, an extended-school-year program, or a registered summer school program. Academic and related occupational subjects may be taken prior to or concurrently with the occupational experience phase of the program.

Evening/Weekend scheduling--In some cases, employment opportunities are only available in the evening or on the weekend. This may be because of the nature of the work, the employment needs of the employer, or the time of availability of the on-the-job instructor.

As you can see, these scheduling options can allow an institution to increase use of facilities and service to students.

It is generally agreed that the optimum number of students who can be served by a single teacher-coordinator in a cooperative vocational education program is 15 to 25. Fewer than 15 is difficult to justify in terms of cost. More than 25 is unmanageable in terms of meeting the needs and wants of the students, the employers, the school, and the community. This ideal may not, however, be possible within the funding structure in some states.

To successfully plan, develop, and implement coordination activities, it is necessary for the teacher-coordinator to have released time. Released time is that time provided the teacher-coordinator during the "normal" school hours for activities other than his/her classroom responsibilities. The accepted standard for determining the amount of released time needed is one half hour per student per week. Therefore, a teacher-coordinator with 20 cooperative students should have 10 hours of released time each week for coordination. It should be remembered that "coordination" is an all-inclusive term to describe all of the various activities of the teacher-coordinator, not just visitation to the training stations.

The uniqueness of the program also indicates the need for special considerations regarding program facilities. The teacher-coordinator should have an office, equipped with a telephone, where he/she can conduct necessary activities including conferences with students, employers, parents, and other parties who might be involved in the program.

Finally, teacher-coordinators of cooperative vocational programs often have extended contracts. Such contracts usually provide for an additional month of employment for the teacher-coordinator. This month is often split, with two weeks before the regular opening of the term and two weeks after

the regular closing of the term. During this time, some of the teacher-coordinator's responsibilities are (1) placement of students in training stations, (2) the planning and development of specific occupational instruction for each student, (3) the placement of graduating students, and (4) the compiling of student files and any necessary reporting.

For more information concerning cooperative education and for a directory of the employers and institutions offering the program, write to the National Commission for Cooperative Education, 360 Huntington Avenue, Boston, MA 02115.

Capstone Experiences

A capstone is, literally, the last, top stone to be put into place in a structure. Thus, it means a "finishing off." A capstone experience is one that puts a finishing touch on things. In occupational/vocational/technical education, it refers to an occupational experience generally undertaken by students who have completed the course work in a particular program. These students are usually exposed to an actual work situation according to one of the following typical capstoning schedules:

- Semester I = classroom/laboratory activities
  Semester II = occupational experience
- Semester I = classroom/laboratory activities
  Semester II = 10 weeks in the classroom and laboratory
  10 weeks of occupational experience
- Semester I = classroom/laboratory activities
  Semester II = 4 days of occupational experience per week
  1 day of related instruction per week, provided at the job site or in school by the classroom instructor

The capstone experience should be similar in purpose and characteristics to the cooperative education program. Where it differs is in the scheduling. The cooperative education program tends to blend in-school education and on-the-job training; the capstone experience comes at the end of the in-school education, serving to move the student from theory into practice.

On-the-Job Training (OJT)

OJT is the actual performance of work duties with the supervision and guidance of a trained worker or instructor. OJT programs increased in number through funding available from the Comprehensive Employment and Training Act (CETA). The program was created primarily to give job skills to the unemployed or underemployed, while at the same time helping the employer to defray some of the loss of production resulting from the hiring of unskilled employees. Employers can be reimbursed for up to 50 percent of the trainee's starting salary during the entire training period. In addition to the above training reimbursement provisions, a special reimbursement allowance can be

established for job-related education, which will provide 100 percent wage reimbursement for those hours a trainee spends in educational--nonproductive--training sessions.

The relevance of this to vocational-technical education relates to the provision of the job-related education (JRE). If an employer is unable to provide the necessary JRE on the job, one option is for CETA to contract with a local vocational-technical institution to provide that instruction. This can be an excellent way to make full use of the school staff and facilities, and to bring additional funds and students into the school.

Another option for on-the-job training--being used, for example, in Fairfax County, Virginia--involves the creation of an "employment situation" for students. In Fairfax County, a foundation was formed involving attorneys, realtors, and other interested community members. This group floated a loan to finance the construction of the initial building constructed by students in the vocational school's building trades program. Profits from the sale of that and subsequent buildings supported continued construction. Students and school instructors spent full-time at each job site. Academic and related instruction were provided there, initially in a mobile home. Later, students constructed a totally modular classroom--even the electricity was modular--and this classroom was moved from job site to job site. On-the-job training in action!

Apprenticeships

Just as a vocational-technical institution can provide the related-instruction component for CETA-supported OJT, it can also develop program offerings for apprenticeship training. In an apprenticeship training program, the apprentice is an unskilled worker who is learning a skilled craft or trade (e.g., electrician, carpenter, plumber, printer, machinist) under the direction of a skilled worker (journeyman) and with the support of the union. Apprenticeship training programs are typically two or more years in length, depending on the skill requirements of the trade or craft. They are operated by either (1) an employer, (2) a group of employers, or (3) a joint apprenticeship committee (JAC) representing both the employer(s) and the union. Sometimes, a representative from the educational community is also included on the JAC. In some states, such programs must be approved by and registered with the state government (labor department) to be considered bona fide apprenticeship programs.

Apprenticeship training consists of two components: (1) on-the-job training and (2) related classroom instruction (minimum of 144 hours per year). More and more, JACs are engaging in cooperative ventures with post-secondary institutions for the provision of apprenticeship training, retraining and upgrading, and labor studies. In these cases, the postsecondary institution develops the programs at the request of, and with the approval of, the joint labor/management committee. Help in setting up these programs is usually readily available from the state-level Bureau of Apprenticeship and Training. An example of one such program is shown in sample 4.

SAMPLE 4

POSTSECONDARY APPRENTICESHIP TRAINING PROGRAM

200 now studying in Center's Program for Apprenticeship and AA Degrees

Classes are continuing at four community colleges participating in the Tripartite Program for Apprenticeship and Associate Degree in Labor Studies sponsored by the George Meany Center with funding from the U.S. Department of Labor.

This program provides union members with the opportunity to get college credits for apprenticeship training while working toward a two-year Associate of Arts degree in Labor Studies. Richard Hindle and David Alexander are directing the program.

The four colleges participating in the program are Bunker Hill Community College, Charlestown, Mass.; College of the Mainland, Texas City, Tex.; Des Moines Area Community College, Des Moines, Ia., and Rhode Island Junior College, Providence, R.I. Nearly 200 AA now enrolled in these classes.

The program consists of three parts: Core subjects required by the colleges, apprentice training which will be evaluated for college credits by the college working with a local labor advisory board, and specialized courses in labor studies developed by the George Meany Center.

Three courses: Survey of Labor Relations, U.S. Labor History, Structure and Functions of Unions, Economics of Collective Bargaining, Labor-Management Classes, Administration, Labor Law, and Comparative Labor Movements.

They will be taught from textbooks being written for the program by labor educators under the direction of the program staff.

The George Meany Center has contracted with the Bureau of National Affairs, Inc. to publish the texts when completed. The first text, *Survey of Labor Relations*, will be available early in 1981.

The George Meany Center conducted five workshops last year to train college instructors who will be teaching these labor studies courses. The program staff is planning a final conference sometime in 1981 to provide information for all interested community colleges, labor unions, and others about the Tripartite Program, the development of the labor studies texts, and the assessment of apprenticeship programs for college credit.

For more information on the program, write Apprenticeship and Associate Degree Program, George Meany Center for Labor Studies, 10000 New Hampshire Avenue, Silver Spring, Md. 20903.

SOURCE: 1981 Laborite, a newsletter published for alumni and friends of the George Meany Center for Labor Studies, p. 2.

Another example is the chef and cook apprenticeship programs offered in Ohio at Columbus Technical Institute (CTI), with the support and approval of the American Culinary Federation and the Columbus Chef's Association. The apprentice is a full employee and is subject to the conditions of the individual employer's policies as related to fringe benefits and vacations. He or she is guaranteed the federal minimum wage, with regular increments of 25 cents an hour every six months. The apprentice pays for his/her own tuition for theory-related instruction at CTI. Books and lab fees are additional.

In some cases, apprenticeship credit is being offered through programs at the secondary level. One example of this is the Cooperative Industrial Education Program (CIE) at Rancocas Valley Regional High School in Mount Holly, New Jersey. With approval from the Bureau of Apprenticeship and Training in the U.S. Department of Labor, the coordinator of the school's cooperative program in industrial education--a diversified program serving a range of occupations--has developed a program in which as many as fifty students a year earn, learn, and get apprenticeship credit during the last two years of high school.

However, according to Robert Glover, Chairperson of the Federal Commission on Apprenticeship--

> . . . apprenticeship sponsors remain quite committed to retaining the essentially private character of the system, and they are highly resistant to any effort which they view as government intervention. Partly because of this suspicion of public sector involvement and partly resulting from the failure of public schools to understand apprenticeship and reach out to industry in the past, meaningful alliances between vocational-technical schools and apprenticeship programs are sensitive and difficult to build despite the fact that related classroom instruction is often provided to apprentices by local school systems or community colleges.[5]

For this reason, it is important that educators "do their homework" before seeking such alliances. Knowledge of the various types of apprenticeships (e.g., construction vs. industrial-corporation based) and knowledge of the specific concerns of apprentice trainers in the immediate geographic area are essential if joint efforts are to become a reality.

Clinical Experiences

Hands-on, on-the-job experiences are provided to students through clinical experiences. Although clinical experiences are most common in

---

5. Robert W. Glover, Apprenticeship in the United States: Implications for Vocational Education Research and Development, Occasional Paper No. 66 (Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1980) p. 1.

the health-related occupations, they have also been used successfully in other programs (e.g., commercial art, drafting, marketing and distributive education, interior decorating, advanced shorthand, and cosmetology). The unpaid clinical experiences offer students an opportunity (1) to apply the classroom theory they have learned under the supervision of a clinical instructor and (2) to gain experience in the very important area of working with other professionals and customers, clients, or patients. Often, the clinical experience is split among several different facilities (or among multiple units within an agency) to allow the students to get a broader picture of the employment opportunities available to them and to learn to generalize their skills to a variety of situations. At the secondary level, clinical experiences are frequently an integral part of such programs as practical nursing, dental assisting, medical lab assisting, and nurse's aide. In a dental assisting program, for example, students may spend six weeks in a dental clinic and three weeks in a private dental office as part of the total curriculum.

At the postsecondary level, clinical experiences are an important part of such programs as the following technologies: mental health, respiratory therapy, nursing, animal health, medical, dietetic technician, and dietetic assistant. The following is a description of one such program incorporating clinical experience:

> Mental health technology--A series of three clinical experiences, offered over a six-quarter time period, is provided to give trainees a broad overview of the different ways of delivering mental health services: (1) a clinic in community mental health, (2) a clinic in residential treatment, and (3) a clinic in mental retardation. During the clinical experience, students have an opportunity to observe all the service components of the facility and to practice basic skills under close supervision.
>
> The clinical experience is integrated with classroom work. Prior to each experience, students are prepared for the experience through classroom training. During the experience, the student spends 12 hours per week in the clinical agency and 2 hours per week in a related seminar. In addition, three-way meetings (faculty member, field instructor, student) are held three times a term to give and get feedback on each student's progress. In this particular program, the agencies providing clinical experiences receive tuition credit at the college in return for accepting students in field placement.

Internships

Generally speaking, internships are a capstone type of occupational experience, found most often at the postsecondary level in such programs as law enforcement, social services, and secretarial science. If you consider the medical model of internship, you can quickly identify its characteristics. The medical student does not become a full-fledged doctor--with authority to practice on his/her own--upon graduation. First he or she must complete an

internship--supervised practical training on the job. The medical internship is usually one year in length. It is a time when the intern serves almost as an "assistant" doctor.

As with the capstone and clinical experiences, an internship occurs when training is completed and functions as a way to provide the novice with additional on-the-job experience before being "certified" as a fully qualified member of the profession. The internship can be a paid or unpaid position. The differences between the clinical experience and the internship tend to be as follows:

Clinical experience--The experiences on the job are highly planned, highly controlled, and highly supervised. The student of nursing, for example, is assigned to spend a period of time, in a supervised situation, administering injections. In the dental clinic, the patient with tea-stained teeth is assigned to the student who needs more experience in performing the skill of removing tea stains.

Internship--The experiences on the job are situational and less highly supervised. In other words, the intern is expected to handle the normal routines of the job as they arise--to select the right procedure or skill according to the situation. It is the results of his/her activities that are evaluated rather than each step as it is performed, except of course in critical operations involving patients' well-being or expensive materials.

Shadowing

Shadowing is generally a method of providing students with short-term exposure to the world of work. It is more of a career awareness technique rather than a program involving hands-on job experience. Shadowing means that the student follows an employee or employer around on the job for a short period of time (a few hours to a few days) to observe what that person actually does. Thus, the student studying electronics could shadow persons working in several different jobs involving those skills to get a better idea of what he or she is training for. In addition to helping the student make wise career decisions, use of this technique can be a powerful motivation to succeed in school.

NOTES

Chapter III

SUPPLEMENTAL/REMEDIAL PROGRAMS

Supplemental programs are those that offer any student the opportunity to raise his/her basic learning skills to a higher level, usually a level above the norm. The student could succeed in school without these programs. Remedial programs are those that offer students whose basic skills are below the norm an opportunity to catch up. The student would have difficulty succeeding in his/her vocational-technical program without additional assistance.

Supplemental Program Topics

Some students--whose reading, writing, and math skills are adequate--may desire to improve those skills through supplemental program offerings. In addition, the following are often topics covered through supplemental program offerings:

- Library skills
- Study skills
- Speed reading
- Advanced vocabulary development
- Career planning

Remedial Program Topics

For the students who need additional assistance in mastering the basic skills required to succeed in an educational or occupational environment, the following topics are typically covered:

- Basic writing
- Basic reading
- Basic arithmetic
- Spelling and vocabulary

Program Structures

Remedial and supplemental courses can be offered within the normal departmental structure (including basic writing in the English or communications department, for example). Or one or more separate departments or

special programs can be created to include these offerings. As presented in this guide, programs for students with special/exceptional needs are covered as a separate component. However, in some institutions, many or all of the programs for students with special/exceptional needs are grouped with the remedial and developmental offerings, under the administration of a single department or other administrative unit such as student services. In one institution, for example, the administrative structure is as follows:

> All supplemental/developmental programs are within the domain of a single developmental education department. Administration is provided by a chairperson, who reports directly to the department of student services. A total of 1.5 FTE (full-time equivalent) faculty members, 1 FTE secretary, 14-23 part-time faculty, and 3 learning lab control clerks serve 1,000 students per quarter. Peer tutors are also available. Programs and courses are provided four quarters per year, five days and four evenings per week. Placement tests are provided and encouraged but not required for students to avail themselves of services. Many students are referred by faculty and counselors or through self-referral.

Within the general administrative structure, several options are available for providing the necessary instruction: specialists, learning laboratories, tutoring, mini-courses, and so on.

Specialists. The institution may hire a reading specialist or remedial math specialist to work with students as needed. Typically, the specialist works with students on a one-to-one or small-group basis to provide the maximum personal attention per student.

Learning laboratories. The provision of a learning laboratory--where students can work with media, programmed materials, or learning packages (learning guides or modules) to get the basic skills, intensive practice, or opportunity for review needed--is another option. In some cases, the remedial specialists could be located in this facility to provide special assistance if needed. Often, a student can sign up for a full-term, individualized remedial or developmental course offered in the laboratory facility under the supervision of instructors or specialists. Course credit (e.g., two to four credits) could be earned for courses taken in this way. At the postsecondary level, a lab fee is usually involved.

Tutoring. At the secondary level, tutors are most often teacher's aides or community volunteers; however, peer tutoring can also occur. At many postsecondary institutions, there is a formal peer tutoring program within the developmental education unit. Peer tutors can be recommended by faculty, receive formal training, and be paid a minimum wage for their services. Thus, a student who is having difficulty with the content of a particular class can get the additional personal assistance and time on task needed to keep up with the class. State funding is frequently available to support tutoring services, as long as there is a structured program.

Mini-courses. In some cases--library skills, study skills, career planning--sustained programming is not required. Such topics can be structured into short (e.g., two days or one week) courses or workshops, which can be offered periodically throughout the school year. The school librarian, for example, could be responsible for developing and conducting a one-day library skills workshop, offered at the beginning of each term for interested students.

Implications for Program Planning

In determining whether such programs should be offered--especially in the case of the supplemental programs, which could be considered to be nonessential to some educational critics--budget, staff, facilities, and student needs should be deciding factors. If programs are to be offered, decisions such as the following will need to be made:

- Where will these programs be placed administratively? Within existing academic departments? Within one or more special separate departments? Will a new department need to be created?
- Is present staff qualified to handle the programs or will new staff (e.g., a reading specialist) be required? What staff other than faculty will be required (e.g., tutors, lab assistants, aides)?
- Will there be a laboratory facility? Where? How will it be operated? What materials and equipment will be housed there? Are the institution's present materials and equipment adequate, or will new materials and equipment be required to provide the personalized, individualized instruction needed?

As these questions are posed, discussed, and answered, budget limitations must be considered. Solutions that provide the maximum value for students using existing resources should be sought. New programming should not always be equated with all new staff, facilities, equipment, and materials.

NOTES

Chapter IV

SPECIAL NEEDS PROGRAMS AND SERVICES

Because of recent legislation and social changes, there is increasing attention being paid to recruiting and providing relevant vocational instruction for students with special/exceptional needs.

> During the decade of the 1970s, the Congress of the United States enacted two pieces of legislation that, together, open wide to handicapped persons the opportunity to participate more fully in the mainstream of American education. They are Section 504 of the Vocational Rehabilitation Act (1973) and Public Law 94-142, the Education for All Handicapped Children Act of 1975. Section 504 authorized vocational training in mainstream settings for handicapped persons, the promotion and expansion of the employment opportunities for them, and the removal of all architectural and transportation barriers that impede handicapped persons. Public Law 94-142 mandates equal educational opportunity for all handicapped children; free and appropriate education; placement in regular public school settings with their nonhandicapped peers to the extent that it is feasible; cooperatively written Individualized Education Programs (IEPs); provision of special education and related services as needed; and observance of handicapped children's and their parents' due process rights. . . . Many children affected by the law are also gifted and talented. Moreover, several states already have acted to bring all their gifted and talented students under legal provisions equivalent to those of Public Law 94-142.[6]

Broadly defined, special/exceptional needs are those that may prevent a student from succeeding (to the best of his/her ability) in regular vocational-technical education programs without special consideration and help. The following types of students can be included in a definition of students with special/exceptional needs:

- Mentally retarded
- Learning disabled
- Sensory and physically impaired
- Urban/rural economically disadvantaged
- Members of racial/ethnic minority groups

---

6. "A Common Body of Practice for Teachers: The Challenge of Public Law 94-142 to Teacher Education" (Minneapolis, MN: Univeristy of Minnesota, The National Support Systems Project, n.d.).

- Persons with limited English proficiency
- Adults requiring retraining (e.g., displaced homemakers, technologically displaced)
- Persons enrolled in programs nontraditional for their sex (e.g., the male in home economics)
- Gifted and talented

Depending on the educational level, institutional mission and philosophy, and community needs, other special needs may be recognized and addressed--the emotionally disturbed or the teenaged parent, for example (see sample 5).

Programs/Services

Once having recognized the groups whose special needs must be met, programs and services must be selected to meet those needs. A wide range of options is available. Furthermore, technological advances continue to assist special groups such as the handicapped. And the cost of equipment is lessening (e.g., for electronic equipment) as the market expands and competition increases. On the other hand, federal funds are at present decreasing rapidly at a time when other costs and inflation continue to rise. Creative, innovative solutions to providing the needed programming are required. The following are some services and programs presently being offered:

Resource Persons

- Interpreters--These are persons who recreate spoken language in sign form and/or reverse this procedure. Theoretically, the provision of an interpreter in the classroom or laboratory allows the deaf person equal access to the competitive educational process. American sign language, manually coded English, fingerspelling, paraphrasing in nonaudible spoken English, gesturing, drawing, or writing are all used by the interpreter (or transliterator) to convey class proceedings to hearing impaired students.

- Readers--For the visually impaired, readers may be needed. Readers can meet individually with students to read assignments or review notes aloud. They could also be used to tape reading assignments for individual use by visually impaired students.

- Notetakers--Some students are unable to take their own notes in class. This may be true for the visually impaired student, the hearing impaired student who must keep his/her eyes always on the instructor in order to "hear," or the physically impaired student who has difficulty using a pen or pencil. One solution for the visually or physically impaired student is to tape the class proceedings. Another option is to have a notetaker take class notes. If well done, these can be given directly to the hearing or physically impaired student. For the visually impaired, the notes would need to be brailled or read onto tapes.

SAMPLE 5

OCCUPATIONAL SKILLS FOR PREGNANT ADOLESCENTS

Board of Cooperative Educational Services (BOCES)
Second Supervisory District of Suffolk County
New York

One often-ignored population, which was not served in any way in the Suffolk County BOCES II region, was the ever-increasing numbers of adolescent female students who become pregnant and, frequently, interrupted or discontinued their education as a result. According to these data, the student population served by this BOCES had the highest number of pregnancies of any of the towns in the area during 1977: a total of 1,769 teenage (aged 10-19) pregnancies. When surveyed about the need for a program to serve this population, the 23 district high school principals projected that 300 students could be served.

The project proposed by BOCES II would enroll 50 female students, all of whom are (1) pregnant, (2) foster children under guardianship, (3) recipients of public assistance, and (4) in need of special services assistance or programs in order to succeed in vocational education programs. All enrolled students in the proposed program would, therefore, meet the criteria for classification as students who are disadvantaged.

According to the proposed program design, students would attend a full-day program (5 1/2 hours, exclusive of lunch). One part of the day would be spent in vocational assessment and training. The other part of the day would be spent in courses covering academic subjects and subjects related to the special needs of these students (e.g., parenting education, nutrition education, prenatal care needs instruction). Career orientation, career counseling, and referral to community services as needed would also be a part of the program. The overall goals of the Occupational Skills Program for Pregnant Adolescents are as follows:

- To provide occupational education and career guidance to students who become pregnant while attending local high schools
- To afford these students the opportunity to continue their academic education, while providing instructional opportunities in areas directly related to their unique situation

The objectives of the program are as follows:

- To provide pregnant adolescents with the opportunity to continue their education
- To provide parenting skills, nutrition education, and occupational awareness to pregnant adolescents
- To encourage students in the program to pursue occupational education in nontraditional areas with high placement potential (e.g., welding, metal machining, air conditioning, heating, electronics, and offset printing)
- To provide academic learning experiences to assist students in "keeping up" with students remaining in the school setting
- To reduce the drop-out rate of pregnant adolescents
- To reduce the incidence of child abuse

The program would be designed for open-entry/open-exit. This design is necessary due to the unique needs of the target population.

NOTE: Legally, a program such as this can only be offered as an optional alternative to placement in the regular vocational program. It cannot be a required approach for all pregnant students; "separate but equal" is not allowed.

- Tutors--Because of their special needs, some students have difficulty progressing at the classroom pace set. In such cases, tutoring may be required.

- Specialists--Some special needs students may require remediation in the basic skills. The learning disabled student may have a great deal of difficulty when reading is involved. Disadvantages may have caused a student to fall behind in the basic skills. English--or standard English--may not be a student's native language. To assist these students, reading specialists, remedial math instructors, English-as-a-Second-Language (ESL) instructors, and other specialists may be needed. An example of the activities that are a part of the special support provided to handicapped individuals enrolled in the regular occupational education program at the Brookhaven and Islip (New York) Career Centers is shown in sample 6.

- Counselors--Students with special needs may require special counseling. Some may lack survival skills. Many may have more difficulty locating and acquiring jobs. Counselors need to be prepared to handle these special needs, especially in the areas of job placement and referrals to appropriate agencies. In addition, if counselors are to administer placement tests, they must be prepared to modify the testing situation to accommodate students' special needs. The testing situation can be modified in a number of ways, including the following:

  - Allowing more time than normally prescribed
  - Use of readers, scribes, or interpreters
  - Transcribing test into braille or large type
  - Taping exam or responses

Equipment

- Specialized equipment that can assist learners is available, and new equipment is rapidly becoming available. This is partly due to the recent growth of the electronics industry, the recent thrust of federal legislation in support of equal opportunties for special groups, and the emergence of related special interest and advocacy groups. Sample 7 gives a list of some of the specialized equipment available.

Facilities

- Resource center--Often a separate resource center (or separate area of a resource center) can be of great benefit to students with special needs. The center can house the resource persons, equipment, and materials needed by these students--all in one central location designed to be accessible to each student regardless of his/her special needs. It could, for example, include a library of braille materials and taped texts. It could be reached by TTY telephone by hearing impaired individuals. Counseling services could be made available there, also.

SAMPLE 6

SUPPORT SPECIAL OCCUPATIONAL STUDENTS PROJECT

Brookhaven/Islip (New York) Career Centers

As part of this project, four special education teachers--trained in reading, math, and personality adjustment training--provided remediation for 80 handicapped students enrolled in the regular occupational programs. Selected project activities were as follows:

- The reading and math resource teachers worked with individuals or with small groups in the occupational shops as the need arose.
- The reading and math resource teachers used actual problems in the occupational area shops to teach and reinforce the reading and math skills necessary to function successfully in that particular occupation.
- The reading and math resource teachers were flexible and had the ability to concentrate on particular subject areas until the student had adequately mastered that subject.
- The reading and math resource teachers applied math and reading skills through the occupational course content to help the student experience success in the area.
- Where more intensive tutoring was necessary, the reading and math resource teachers brought individuals or small groups to the resource room for concentrated assistance.
- Tutoring for the mainstreamed student was provided using materials supplied by the occupational shop instructors.
- Mainstreamed students who had difficulties in reading could have their tests read to them and their answers written when necessary.
- Mainstreamed students had their basic skills improved while attending the regular occupational center.
- Mainstreamed students mastered their lessons on a daily basis, with the extra assistance provided by the resource teacher.
- Students increased their reading comprehension by practicing with materials from their own areas of interest.
- The reading and math resource teachers established occupational vocabulary lists to assist students in acquiring the needed vocabulary.

It is felt by staff involved in this project that students experiencing the assistance and success inherent in this project will be more motivated, perform increasingly better both in the basic skills and occupational skills, desire to learn more, and ultimately, perform better on the job.

SAMPLE 7

SOME SPECIALIZED ADAPTIVE EQUIPMENT

- Visualtek--This is closed-circuit magnifying equipment. A television camera views the printed page or other material, and a television monitor displays the image in enlarged form.
- Optacon and Optacon training equipment--This provides tactile ability to "read" print using an electronic device.
- Tape and duplicating equipment--This equipment provides recordings of educational materials.
- Large-print and braille typewriters--The former produces type that is enlarged; the latter produces braille type.
- Auditory training aids--This is a wireless electronic amplification system consisting of an instructor microphone/transmitter, binaural student FM receiver, and a recharging unit. The system allows the hearing impaired student to have personal amplification in the classroom setting.
- Talking calculators--Various models that "speak" are available, and they come with an assortment of basic functions, from independent memory to accumulating memory.
- TTY (teletypewriter)--The TTY allows deaf persons to communicate over the telephone; such a device must be located at each end of the telephone conversation. Some devices type the message on a paper roll, while others display the message on an electronic calculator-like display panel.
- Braillewriter--This is a machine that allows for the reproduction of braille on paper. It is operated by six keys, one for each dot in the braille cell.

- Accessibility--By federal law, institutions and programs supported by federal funds must be physically accessible to all. Thus, facilities must be constructed or modified to include the following types of features:
  - Ramps and elevators for mobility impaired students
  - Convenient parking
  - Brailled numbers on elevators and doors
  - Low phones and water fountains
  - Special restroom faciiities
  - Special fire-disaster evacuation procedures to ensure exit by mobility impaired students
- Orientation--Special orientation sessions may be required to ensure that students with special needs can negotiate the building. A slow walk through the building with a "tour guide" may be required for the visually impaired. Special features--provided to facilitate the ability of the mobility impaired to use the building--may need to be pointed out to these students. A written orientation manual could be provided to the hearing impaired. A taped orientation could be provided for the visually impaired. Braille maps could be provided. With a little effort, the transition of the student into the institutional mainstream can be greatly eased.

Training

Implicit in the provision of programs and services for students with special/exceptional needs is the necessity for training of staff and students to make full, effective use of these provisions. All must be aware--through orientations, printed material, media--of exactly what is available and procedures for use.

In addition, if a true commitment to the accommodation of special populations is to be made institutionwide, staff must be provided with the knowledge and skill required to adequately serve these populations. Staff development devices and activities such as the following can be used to provide the necessary training:

- Seminars on characteristics of various special needs groups
- Workshops on effective instructional techniques for use with special populations
- Workshops on the development and use of Individualized Education Programs (IEPs)
- Mini-course on braille
- Mini-course on American Sign Language

- Workshops involving simulations of handicapping conditions
- Seminars with staff at other institutions
- Presentations by staff from outside agencies (e.g., Bureau of Vocational Rehabilitation)
- Special services handbook
- Special services newsletter

Finally, a structured--preferably individualized--training program should be designed to prepare the special resource persons: note takers, interpreters, readers, and so on. If their services are to be effectively used, they must understand their role, its responsibilities and limits. Having a written training guide is a good way to ensure that this happens.

Implications for Program Planning

If students with special/exceptional needs are to attend the secondary or postsecondary institution--and they are in increasing numbers--then the institution must provide for their successful accommodation and support. The administration will need to consider what is needed and then--based on the available funds, staffing, facilities, equipment, and instructional materials--decide what is possible. With creativity, a great deal can be accomplished through adaptation of existing resources.

Students with special/exceptional needs can be enrolled in the regular vocational program or in separate programs especially designed to meet their needs. Administrators will need to decide--based on philosophical and organizational considerations--which program structure to use. On the one hand, it is often easier, more efficient, and more effective to operate a separate program. Consider the example in sample 5. The unique needs of the pregnant adolescents in that school system caused the system to structure an optional, separate program, which would allow for open-entry/open-exit as well as the provision of specialized subject matter.

But beware, separate is not always equal. You cannot integrate individuals with special/exceptional needs into the mainstream by isolating them in the educational setting. You cannot promote peer acceptance if the "special" are kept apart. It is usually preferable to include special students in regular programming to the extent possible, based on their needs and skills.

A final consideration of particular importance in planning special needs programs and services is student recruitment. Individuals who could benefit from the provision of these special services need to be aware of their availability. In planning the institution's recruitment program, attention must be paid to the inclusion of devices and activities targeted to special populations. For example, a brochure describing the program offerings and services available to serve special populations could be produced. Spot media announcements could also be run to recruit in this area. With promotion, the programs can continue to serve the student groups for whom they were designed.

Chapter V

COMPETENCY-BASED EDUCATION

Competency-based education (CBE) is one of the most significant educational innovations that has surfaced within the last fifty years. CBE has been endorsed at the local, state, and national levels and is also catching the attention of many international educators. CBE is now a rapidly growing and sustained movement, leading to the improvement of instruction.

CBE is an alternative to the conventional approach to instruction that has too often meant frustration and failure for too many students. CBE acknowledges and, in fact, capitalizes on the facilitation of effective and efficient learning, which is relevant to the real world of work, by employing the learning principles of motivation, individualization, reinforcement of learning, self-pacing, recognition of differing learning styles, provision of frequent feedback, opportunities for practice, and active participation.

Essential Elements and Desirable Characteristics of CBE

Traditionally, in all of education, we have accepted the option of making learning the variable and time the constant. Whenever we say that a course involves so many hours of instruction, we are openly admitting our acceptance of this historical approach to education. A set number of hours per course is admittedly an administrative and planning convenience that is hard to give up. However, under these circumstances, our teaching is often geared to covering as much information as possible in the time permitted, in hopes that enough will be learned to allow our students to be successful.

Many persons feel it is about time that those involved in vocational and technical education should opt to implement programs in which learning is the constant and time the variable. Vocational educators in many states are currently working hard to make this option a reality in their vocational and technical education programs through the implementation of competency-based education (CBE).

To understand fully the meaning of CBE, one must be aware of the essential elements and desirable characteristics of such programs. There are five essential elements:

1. Competencies to be achieved are carefully identified, verified, and made public in advance--This simply means that the important entry-level competencies for any occupational program area must be identified in some appropriate manner, verified as relevant by experts who should know that field, and then made known to students and everyone else interested in what the program is designed to teach.

2. Criteria to be used in assessing achievement and the conditions under which achievement will be assessed are explicitly stated and made public in advance--This means we are going to eliminate guessing games about what parts of the course are important and, instead, tell students exactly how their performance will be evaluated. The implementation of this essential element also means that we are giving up the traditional norm-referenced approach to the evaluation of student achievement in which the focus is on comparing a student's progress with that of other students. In its place, we are adopting the criterion-referenced approach in which each individual student's progress is compared with previously established criteria that are made known to all who are concerned.

3. The instructional program provides for the individual development and evaluation of each of the competencies specified--What we are saying here is simply that (a) each student shall be given the opportunity to develop each of the competencies important to his/her training program and (b) each student will be given the opportunity to demonstrate attainment of each competency. This essential element has strong implications regarding the need to individualize CBE programs to the maximum extent possible and to provide the type of instructional materials needed to make individualization possible.

4. Assessment of competency takes the students' knowledge and attitudes into account but requires actual performance of the competency as the primary source of evidence--CBE goes beyond the traditional educational expectation that students should know the "how" and "why" of things and places a strong emphasis on the "ability to do" as well. Of course, in order to perform a task correctly, the student will need to acquire the necessary prerequisite knowledge and attitudes. Acquiring the necessary prerequisite knowledge and attitudes involved, however, does not by itself ensure the student's actual ability to perform important competencies. It is with regard to this essential element of CBE that many programs fall short, relying instead only upon paper-and-pencil tests of cognitive understanding as proof of competency. While such measures can appropriately be used to assess prerequisite knowledge, they must be supplemented by performance-oriented, process-and-product checklists or other measurement devices that permit assessment of the student's actual ability to perform the expected competencies.

5. Students progress through the instructional program at their own rate by demonstrating the attainment of specified competencies--Said in another way, we want to make time the variable and learning the constant. Again, it is clear that some individualization of instruction is called for. While student progress is dependent upon the demonstration of competencies, this element does not mean that reasonable time limits cannot be imposed upon the students. Some persons may want to interpret this element to mean that only the student is accountable for his/her progress. Not so--a CBE program places accountability for learning squarely upon the shoulders of both the learner and the instructor.

The additional desirable characteristics of CBE programs are as follows:

1. Instruction is individualized to the maximum extent possible, rather than group-paced.
2. Learning experiences are guided by frequent feedback.
3. Emphasis is on helping the student achieve program exit requirements.
4. Instruction is individually paced rather than time-based.
5. Instruction is, to a considerable extent, field-centered--based on realistic work problems and situations.
6. Instruction is often modularized and uses materials with both required and optional learning activities to help achieve flexibility and provide for different learning styles.
7. The program as a whole is carefully planned and systematic (e.g., concerned staff are involved in planning, and evaluation data is used for program improvement).[7]

Differences Between CBE and Conventional Programs

To help the reader visualize some of the major differences between a CBE program and a conventional program of vocational education, twelve factors related to each of the programs are presented below. Admittedly, few of today's programs would meet exactly the criteria for either type of program. While most actual programs are probably located somewhere between the two extremes, the comparison helps to summarize some of the basic differences inherent in the two approaches.

	Conventional Vocational Programs	Competency-Based Vocational Programs
1.	Content-based	Competency-based
2.	Time-based	Performance-based
3.	Group paced	Individually paced
4.	Group needs	Individual needs
5.	Delayed feedback	Immediate feedback
6.	Textbook/Workbook materials	Modules and media materials
7.	Limited field experience	Learning in the field

---

7. The essential elements and desirable characteristics presented here are adapted from Achieving the Potential of Performance-Based Teacher Education: Recommendations, PBTE Monograph Series: No. 16 (Washington, DC: American Association of Colleges for Teacher Education, 1974).

Conventional Vocational Programs	Competency-Based Vocational Programs
8. Lectures, demonstrations	Assistance of resource person
9. General objectives	Specific measurable objectives
10. Subjective criteria	Objective criteria
11. Norm-referenced	Criterion-referenced
12. Final grades	Student competence

Advantages of CBE

Vocational programs that are (1) based on the rigorous identification of occupational skills (competencies), (2) individualized and time-free (to the maximum extent possible), and (3) based on student mastery of each competency show many clear advantages over conventional programs. The advantages are not easily realized, however, nor are they automatic or inevitable. Among the most important educational (as opposed to management) reasons for CBE are the following:

- More learners achieve competence than is possible in group-centered instruction.
- Learners may achieve competence in a shorter period of time.
- The learner builds self-confidence and self-esteem by succeeding in learning.
- Students learn to help each other rather than compete for grades.
- The content of instruction is well organized and consistent.
- The final product (the entry-level worker) is more uniform in basic skills and abilities.
- Students can learn according to their preferred learning styles.

School and college occupational programs designed to capitalize on the educational advantages of CBE find that there are also very significant administrative and management benefits to this approach. In fact, it can be argued that the management reasons for CBE are in themselves justification enough. Among the most important of these reasons are the following:

- Students are not required to repeat learning of skills previously acquired.
- Students can obtain ready access to instructional programs.
- Students with a wide range of entry-level skills can be accommodated.
- Programs are readily revised and kept current.

- The instructional staff can be utilized more efficiently.
- Facilities can be utilized more fully and efficiently.
- The placement of graduates in jobs is facilitated.
- Handicapped students can complete the segments of an instructional program that they are able to do.

Implications for Program Planning

Because of the characteristics of CBE--many of which are quite different from the characteristics of conventional programs--it is important that all the essential program components are considered and planned for before the CBE program is installed. Implementation of CBE often requires basic changes in philosophy, staffing, facilities, equipment, and instructional materials. It is not a program that can be quickly adopted in a prepackaged, readily available form. The institution must design the CBE program to incorporate all the essential characteristics and to meet its own characteristics and needs; and staff, students, parents, community, and others must be oriented to this new approach--if it is to work. Sample 8 shows a checklist of items that could be used to help staff in planning and structuring a CBE program.

SAMPLE 8

CBE IMPLEMENTATION PLAN CHECKLIST ITEMS

In describing the institution's current status and desired situation concerning CBE, the administrative staff needs to:

1. identify how the board and administration regard CBE
2. describe CBE programs and activities already planned or underway
3. identify funds available to implement CBE
4. identify staff available to implement CBE
5. identify known constraints or concerns
6. note any CBE features that would have to be deleted or modified for their institution
7. consider carefully how these deletions or modifications would affect the quality of their CBE program

In planning how to handle the competency identification process, the administrative staff needs to:

8. decide whether to identify competencies locally or to verify locally competencies developed elsewhere
9. make their decision based on:
   a. the competency identification system currently in use in the institution
   b. competency lists prepared within the state for use (e.g., by the state department)
   c. competency lists available for the institution's specific vocational-technical programs
   d. budget available
10. decide what process to use in identifying/verifying competencies (e.g., conventional, DACUM)
11. decide who will be involved in the identification/verification process (e.g., staff, advisory committees)

In planning how CBE materials will be provided, the administrative staff needs to:

12. decide whether to secure materials elsewhere or develop them locally
13. make their decision based on:
   a. the instructional materials currently available in the institution
   b. CBE materials prepared within the state
   c. CBE materials available for the institution's specific vocational-technical programs
   d. budget available for development purposes
   e. staff available for development activities
14. decide on the development process to be used, if materials are to be developed locally, including:
   a. how staff will be trained
   b. how staff will be provided with the development time required
   c. general format to be used
   d. media to be included, if any
   e. criteria for evaluating materials

In planning how students and instructional staff will be oriented, the adminstrative staff needs to:

15. consider their current level of awareness concerning CBE

16. tentatively outline strategies and techniques to be used in the orientation process, including those designed to orient students and instructional staff to:

    a. the characteristics of CBE
    b. their changing roles in a CBE program
    c. the institution's specific CBE program
    d. CBE instructional materials
    e. CBE facilities
    f. CBE process

17. identify the persons who will conduct the orientation process

18. identify the materials needed for the orientation process and how they will be obtained

19. consider staff and budget limitations in making the plans

<u>In planning the CBE assessment procedures to be used, the administrative staff needs to:</u>

20. determine whether criterion-referenced performance checklists are available or will need to be developed locally

21. determine who will have responsibility for securing or developing the checklists (and how they will be trained, if necessary)

22. establish tentative assessment procedures appropriate for the CBE program, including:

    a. student's role in the process
    b. instructor's role in the process
    c. at what points assessment will be conducted
    d. provisions for recycling

23. establish a set of tentative performance standards (rating scale) appropriate for the CBE program

24. consider how achievement of competencies will be reported, ensuring that the method selected is compatible with:

    a. the essential characteristics and desirable elements of CBE
    b. the institution's grading system
    c. student needs
    d. employer needs
    e. the limits of instructor time

25. determine if instructors and students will require training in using the assessment procedures, and how this training will be provided

<u>In planning the CBE instructional model to be adopted, the administrative staff needs to:</u>

26. make decisions based on the following factors:

    a. how competencies will be identified
    b. what instructional materials will be used
    c. how students will be assessed

27. consider the degree of individualization sought

28. consider any special features to be included

29. develop a tentative overall instructional model that is:

    a. consistent with CBE concepts
    b. internally consistent
    c. all-inclusive, covering how instruction will be provided to students from initial entry into the program to final exit
    d. realistic in terms of staff, students, and institutional mission and philosophy

In planning how CBE will be managed, the administrative staff needs to:

30. determine how resource center(s) will be provided, considering:

    a. available facilities
    b. available staff
    c. available funds
    d. the actual need per program

31. consider how the physical facilities will be organized to accommodate and foster CBE

32. determine how records and materials will be kept, including:

    a. tentative procedures
    b. where records and materials will be housed
    c. persons responsible for developing and maintaining records and materials

33. determine how the present management system can be modified (fee assessments, faculty load, awarding of credits), if necessary, to accommodate:

    a. open-entry/open-exit
    b. self-paced rather than time-based student progress
    c. competency-based "grading"
    d. increased one-on-one student-teacher contacts

34. ensure that all management plans are realistic and consistent with the principles of CBE

In planning how the implementation of CBE will be initiated, the administrative staff needs to:

35. identify any training activities required to prepare staff to install and manage the CBE program, including:

    a. who will provide these activities
    b. when activities will be held
    c. what staff will be involved

36. identify other specific actions that will need to be accomplished to implement the proposed CBE program, including, for example:

    a. finalizing the implementation plan
    b. securing higher administrative support
    c. orienting staff, students, and others to the program
    d. promoting the program
    e. recruiting students into the program
    f. reorganizing facilities
    g. reorganizing faculty load
    h. identifying needed competencies
    i. developing or securing instructional materials

37. identify, tentatively, the persons responsible and beginning dates for each activity above

Chapter VI

VOCATIONAL STUDENT ORGANIZATIONS

Vocational student organizations are national organizations with local (and often state and regional) chapters. Each organization is linked with an occupational area: marketing and distributive education, home economics, business/office education, and so on. The linkage is not casual. These organizations are intended to function as an integrated and essential part of the educational program. They are intended to supplement, enrich, and strengthen the curriculum.

Although specific goals and objectives vary from one organization to another, in general each has similar overall purposes. Primary among these purposes is to develop students' leadership skills. In addition, the development of the student as a citizen--a responsible, contributing member of society--is considered to be important. The organizations provide students with an opportunity to function as junior members of the profession, with chances for practical application of the skills learned in class and for interaction with others in the occupational area: students and professionals. Providing service, developing decision-making skills, building confidence, developing a respect for the occupation and its code of ethics--these goals and more are typically part of all vocational student organizations.

The national organization helps provide a unified philosophy and structure for each chapter. It also generally produces written guides for advisors, student handbooks, and promotional materials. The organization may, in addition, sponsor conferences and/or contests or award programs. Sample 9 lists some of the existing organizations and describes their purposes and activities.

These organizations are nonprofit; they are supported primarily by dues paid by students to the local chapter and forwarded to the state and national associations. Payment of national dues entitles members to participate in sponsored activities and to receive a subscription to the official student magazine or newsletter.

Additional support comes from contributions from foundations and business and industry. For example, as part of the Future Farmers of America (FFA) competitive program, more than 78,000 members per year are recognized for outstanding achievement in activities related to agricultural career and leadership development. Funds for FFA awards are provided by more than 700 businesses, organizations, and individuals that sponsor FFA programs through the National FFA Foundation, Inc. The FFA Foundation provides nearly half a million dollars to make incentive awards available to deserving FFA members.

SAMPLE 9

VOCATIONAL STUDENT ORGANIZATIONS

American Industrial Arts Student Association (AIASA)
1201 16th Street, NW
Washington, DC 20036
(202) 833-4211

AIASA was founded for students in industrial arts programs in 1978 and operates primarily at the elementary, junior high, and high school levels. Its goals are to assist students in making informed career choices and to help prepare them for entry into advanced trade and industrial or technical education programs. AIASA activities include (1) opportunities for students to meet with and work with leaders from industry, (2) state leadership training for state and local officers, and (3) projects, competitions, and awards.

Distributive Education Clubs of America (DECA)
1908 Association Drive
Reston, VA 22061
(703) 860-5000

DECA is an organization for future leaders in marketing and distribution. Memberships in the following divisions are available: high school, two-year postsecondary, college, alumni, and professional. Its purposes are (1) to develop a respect for education in marketing, which will contribute to occupational competence, and (2) to promote understanding and appreciation for the responsibilities of citizenship in our free, competitive enterprise system. DECA activities include creative marketing projects, civic-related activities, opportunities for state and national recognition, district leadership conferences, and a wide range of competitive activities.

Future Business Leaders of America-
Phi Beta Lambda, Inc. (FBLA-PBL)
P.O. Box 17417 - Dulles
Washington, DC 20041
(703) 860-3334

FBLA is the national organization for all high school students enrolled in business and office programs; PBL serves the same function for students at the postsecondary level. Their goals are to (1) develop business leadership, (2) understand American business enterprise, (3) ease the transition from school to work, (4) establish career goals, (5) encourage scholarship, (6) promote efficient financial management, and (7) develop character and self-confidence. Members can participate in state and national conferences, leadership workshops, and a variety of team and individual competitive events. Selected activities involve students in cooperative school-community-business tasks on the local, state, and national levels.

Future Farmers of America (FFA)
National FFA Center
P.O. Box 15160
Alexandria, VA 22309
(703) 360-3600

FFA is a voluntary vocational organization open to all students enrolled in agricultural education, primarily at the secondary school level. Stated briefly, FFA goals include leadership, citizenship, character, scholarship, cooperation, service, thrift, patriotism, recreation, improved agriculture, and community development. Members learn through active participation how to conduct and take part in public meetings, how to speak in public, and how to take a leadership role in their school and community. Leadership conferences and a wide range of contest and award programs are designed to challenge members. In 1979, a new organization, the National Postsecondary Agricultural Student Organization, was formed to serve students at that level. The national advisor for this group is Byron Rawls, also national advisor for FFA. Information is available by contacting him at the national FFA address.

SOURCE: Most of the descriptions were drawn from promotional materials prepared by the organizations themselves.

Future Homemakers of America/Home Economics
Related Occupations (FHA/HERO)
2010 Massachusetts Avenue, NW
Washington, DC 22036
(202) 833-1925

FHA and HERO are designed for students of comprehensive and occupational home economics. FHA chapters place major emphasis on consumer education, homemaking, and family life education, combined with exploration of jobs and careers. HERO chapters place major emphasis on preparation for jobs and careers, with recognition that workers also fill multiple roles as homemakers and community leaders. According to National Headquarters, FHA (1) provides opportunities at national, state, and local levels for student initiative and directive in planning and carrying out individual and chapter projects, and (2) emphasizes personal growth and the individual's desire to work toward change rather than toward a symbol of recognition, award, or a status.

Health Occupations Students of America (HOSA)
1601 Milltown Road, Suite 7
Wilmington, DE 19808
(302) 995-6020

HOSA is a national vocational organization for secondary and postsecondary students enrolled in health occupations education. HOSA members (1) learn how to communicate more effectively with people; (2) discover more about health care issues and concerns at the local, state, and national levels; (3) involve themselves in community health care education projects; (4) develop confidence in their ability to make a career choice; (5) meet new people and share ideas at state and national conferences; (6) participate in state, regional, and national competitive events; and (7) work with health professions organizations in promoting health careers.

Office Education Association (OEA)
1120 Morse Road
Columbus, OH 43229
(614) 888-5776

OEA serves students enrolled in secondary and postsecondary business and office occupations. Its purposes are (1) to develop dynamic, responsible leadership abilities by participation in vocational education, civic, recreational, and social activities through the use of democratic processes; (2) to assist students in establishing realistic employment objectives; (3) to promote high standards in ethics, workmanship, and social relationships necessary for mature citizenship; and (4) to develop better relationships among students, teachers, parents, and the business community. The program of activities includes conventions and competitive events.

Vocational Industrial Clubs of America (VICA)
P.O. Box 3000
Leesburg, VA 22075
(703) 777-8810

VICA is for full-time preparatory students in secondary and postsecondary vocational courses in trade, industrial, technical, and health education. VICA's list of goals and purposes is long, including such items as (1) to provide opportunities for service, (2) to teach democratic processes, (3) to teach how to live with others, (4) to develop leadership, (5) to foster respect for the dignity of work, and (6) to promote high standards in work ethics, craftsmanship, scholarship, and safety. Members participate in leadership development activities, workshops, conferences, service projects, and contests at the local, state, and national levels.

OTHER ORGANIZATIONS WITH POSTSECONDARY STUDENT MEMBERSHIPS

American Criminal Justice Association-
Lambda Alpha Epsilon
P.O. Box 6104/
Sacramento, CA 95860
(916) 484-6553

International Food Service
Executive's Association
111 East Wacker Drive, Suite 600
Chicago, IL 60601
(312) 644-6610

American Veterinary Medical Association
930 North Meacham Road
Schaumburg, IL 60196
(312) 885-8070

National Student Nursing Association
Ten Columbus Circle
New York, NY 10019
(212) 581-2211

Administrative Management Society
Maryland Road
Willow Grove, PA 19090
(215) 659-4300

National Organization of Human Services
P.O. Box 999, Loretto Station
Denver, CO 80236
(303) 341-0158

American Society of Medical Technologists
330 Meadowfern Drive
Houston, TX 77067
(713) 893-7072

A third potential source of funds is the federal government. Activities of vocational student organizations were identified as eligible for funding under the Vocational Education Amendments of 1976.

The local chapters of these organizations are student-run. Student officers are elected, and they and the membership determine the program or projects and activities--consistent with national goals and purposes--that the chapter will undertake--with support and guidance from a faculty advisor. The program of activities for the year determines funds needed and, on that basis, fund-raising activities are planned and carried out by the membership. Each chapter is self-defining and self-supporting--within the guidelines set by the national organization.

These organizations are extremely vital, especially for students at area vocational-technical centers (AVTS). Frequently, these students are unable to participate in any of the usual club and team activities at the home school because of their schedules and the time spent at the AVTS. Opportunities for membership and leadership can be limited. Vocational student organizations fill this void.

Program Concerns

In order to ensure that vocational student organization activities are an integral part of the vocational curriculum, administrative support is required. The vocational-technical instructor who plans a total program involving and interrelating vocational student organization activities within the curriculum needs the time and compensation to support his/her role as advisor. If the chapter activities are to occur outside of normal school hours, the teacher/advisor should, ideally, be paid for this extra duty in the same way that a coach would be paid. If teachers in the institution are unionized, this will probably be a given. Another option is to provide time within the normal school day for chapter meetings (bimonthly or monthly).

At the postsecondary level, there are additional concerns. For the most part, vocational student organizations have not taken hold at this level the way they have at the secondary level--for a variety of practical reasons. The student population at this level is not as stable: students can enroll for a term and then drop out--temporarily or permanently. In addition, many have families or jobs that require their time. And finally, many of these students commute--sometimes long distances. For these reasons, participation in an extra activity is not as easy. And maintaining a permanent organization with a transient membership is difficult, if not impossible. For student organizations to flourish at this level, the unique scheduling needs of these students must be considered.

The benefits of participation in vocational student organization activities make this extra administrative care worth the effort. In the words of one VICA student, "When I first became a VICA member I had zero leadership ability and no self-confidence to pursue any. To learn who I am, where I'm going or where I can go if I try, and why I am what I am, is probably the best lesson I could have learned in high school. VICA helped me learn that lesson."

Chapter VII

ADULT/CONTINUING EDUCATION PROGRAMS

Vocational education institutions should not consider young persons to be their only clientele. In many cases, adults who have graduated from some type of formal education several or many years ago have an equally strong need to learn the skills required for entry into a particular occupation. In addition, adults may have a need for upgrading or retraining or an interest in learning for personal development.

Furthermore, as the "war baby" boom generation ages but current birthrates decline, middle-aged adults now comprise a larger portion of the population, and they have both the leisure time and the discretionary income available to support additional education of this type. In fact, there are some schools whose adult education enrollment is higher than the secondary enrollment. Furthermore, other schools systematically attempt to "plug their facilities utilization holes" with adult programs. In Pennsylvania and Illinois, to name just two instances, administrators have "tested the water" for mixing adult and secondary students together during the regular day program--with success.

Although the terms adult and continuing are often use interchangeably to describe these programs, some persons see differences between these terms. Thus, continuing education has come to mean, in particular, those programs intended to affect the knowledge, skills, and attitudes of persons who have left the traditionally sequenced educational system. These programs are usually sponsored by postsecondary institutions.

Adult education refers to substantially the same types of programs, but the sponsoring agency is usually a high school, community college, YM/YWCA, library, recreational center, or other community-based organization.

Adult basic education refers particularly to those programs designed for persons who have never received a high school diploma and need special training in mathematics, reading, social studies, and other fundamental subjects, usually culminating in the award of a General Equivalency Diploma (GED).

Community or public service activities or programs are not of an instructional nature in the usual sense but still serve citizens in educational ways. These programs might include lecture and concert series, educational radio and television broadcasting facilities, speakers or reference bureaus, conferences and institutes, cultural exchange programs, consulting activities, and cooperative extension services.

All of the activities described above, regardless of the specific name applied to them, fall within the philosophy of "lifelong learning," a concept

asserting that education is not limited to the ages of 5 to 18 (or 22 or 27) and is not necessarily marked by the awarding of a diploma or degree. For the rest of this chapter, we will devote our attention to the many similarities shared by these programs and will not attempt to differentiate among the several types of adult/continuing education.

In summary, adult/continuing education programs provide education and training for persons who may or may not have completed high school or college and who are seeking new knowledge and skills for whatever reason, without need to earn credit hours or without necessarily aspiring to attain an additional diploma or degree. Furthermore, most share the following characteristics:

- They are flexible in that they allow easy entrance or exit to fairly short-term courses or single workshops, which are usually not tied to the usual academic calendar divided into semester or quarters. If a subject requires only six class sessions for mastery, then only six are held, rather than protract the course over twelve or eighteen weeks.
- They are adaptable and responsive in that the time, place, methods, instruction, and content can easily be altered to suit the needs of the learners.
- They are relevant in that they address current, present needs and usually deal with state-of-the-art technology, methods, equipment, and literature.
- They are innovative in their pricing, use of advertising, and employment of special, short-term insructors.

Let us consider these characteristics in more depth by reviewing how some of these programs are organized and operated.

Program Subjects

The subjects of adult/continuing education programs are not particularly unique. In fact, the usual occupational service areas could be used as a means of classification (namely, business and office, trade and industrial, vocational agriculture, marketing and distributive, and so forth at the secondary level; business, engineering, health, and so forth at the postsecondary level). An alternate means of classification of adult/continuing education programs might be based on the purpose of the courses or the reason the students wish to enroll. These could be broadly divided into general interest vs. vocational preparation and advancement. More specifically, these categories might include the following: general interest; recreational; programs for senior citizens; programs for displaced homemakers; professional updating and relicensure; career development; community leadership development; and training programs for business, industry, labor, or government.

Program Delivery Methods

It is the delivery methods that differentiate adult/continuing education programs most distinctively from traditional alternatives. Although most students in adult/continuing education programs are enrolled in short courses--a fairly common training format--the courses themselves might not extend the same amount of time as usual credit courses do. That is, a common format for a traditional high school level program is 2 hours a day, 5 days a week, for 18 to 36 weeks. At the postsecondary level, classes are often held for 1-2 hours each day, 2-3 days per week, for the duration of a 10-12 week "quarter" or a 16-18 week semester. Courses that are a part of adult/continuing education programs, on the other hand, might last 2-4 hours per session, only once a week, for as long as is required to cover the subject--whether that be 4 or 40 weeks.

Even if the length of the course is orthodox, the time or location might not be. Classes in the evening or on weekends are particularly convenient to those students already holding full-time jobs. Furthermore, the classes could be held right in the factory or office area, at a shopping center, a community meeting room, or a union hall. Colleges and technical institutes will often use classrooms or labs in high school buildings within their service area.

Another common format is the workshop or conference. In this case, a subject is taught by one or a series of instructors in a single session lasting a few hours or a few days. Opportunities for discussion and practice often accompany lectures, films, and other means of disseminating information.

A third means by which adult/continuing education programs communicate knowledge is through correspondence courses. Students are mailed lesson booklets, which contain not only new information but also worksheets or problem sets requiring student work. Periodically, the student completes an examination, often on the honor system--at home, without a proctor, using as much time or as many references as necessary. The examinations are graded, and the student might receive some type of certificate of completion without ever having been physically present at the educational institution.

Courses by newspaper or by broadcast medium (radio or television) have a format similar to correspondence courses but add the attraction of richer visual or audio techniques and productions. The broadcast courses require some accommodation of the student's schedule--he/she must be available at specified times to view or hear the telelecture or lesson, but the broadcasts are often repeated several times over a daily or weekly cycle. To compensate for the lack of interaction with the instructor and fellow students, all of these formats can be combined with occasional group sessions at central or regional locations, perhaps at the beginning of the course, once every month or so during the course, and then once just before the final examination is administered.

Another medium that is helpful to widely scattered students is the telephone. One student (or several, using a speakerphone) can be connected via a conference call with a central resource person. Dialogue and instant feedback

are possible, but the students must adhere to the schedule, and visual presentation of materials is possible only if they are mailed to the students in advance.

Program Marketing

Marketing is a process whereby the providers of a product or service learn about the preferences of their clients and then arrange to provide a particular mix of product/service, price, and place that bests suits this market demand. This is merely another name for the process of program development based on needs assessment, which is generally accepted by educational planners.

The person who plans an adult/continuing education program follows many of the same steps used by one who places a new product or service on the market. To determine the extent of demand, the adult/continuing education administrator either conducts a survey, consults an advisory committee, or receives the suggestions of individuals or groups who desire additional knowledge in a given area. The cooperation and opinions of these same prospective students are solicited while the course content is being selected and organized. Likewise, they can suggest good resource persons, attractive class settings, and acceptable costs.

Because educational institutions are not the only organizations involved in adult/continuing education programs, they cannot assume the public will automatically come to them for these services. Thus, promotion and publicity are crucial to the success of many courses. Radio and TV announcements, newspaper ads, and mass-mailed flyers all play roles in a campaign to inform the public of adult/continuing education programs.

These devices should not, however, be used to lure students away from other community-based educational and cultural programs. Rather, the adult/continuing education programs administrator should strive to replace competition with cooperation. That is, the school, college, YMCA, library, labor union, professional society, etc., within a community should coordinate their services and agree which segment of the market can be served most appropriately by which agency. They should explore cosponsoring events where there is some overlap of "jurisdiction" or where each agency can supplement the resources of the others.

Marketing is related to pricing, which often determines how extensively a course will be attended. Many states provide a reduced subsidy, or none at all, for adult/continuing education programs. Most institutions, in turn, require that the adult/continuing education programs be self-sustaining. That is, it must earn sufficient revenue from course enrollment fees to pay at least the cost of faculty, texts, and materials. Institutions may also expect adult/continuing education programs to pay for overhead charges for an administrative office, or perhaps a pro rata cost of facilities used.

This requirement for self-sufficiency also implies that some courses enrolling too few students will have to be cancelled. This decision is often unpopular with those students who had already enrolled and requires that a registration deadline be set early enough to allow time for the go/no-go decision to be made and communicated to all enrollees. The adult/continuing education program planner is thus torn between conflicting forces--he/she wants to make the course fee large enough to recover all associated costs, but low enough to attract enough students to avoid a cancellation.

Some administrators have chosen a "Robin Hood" approach, whereby certain popular courses serving an affluent clientele are priced high enough to subsidize other courses that seem worthwhile yet are not likely to attract sufficient numbers of students unless offered at reduced rates. Thus, a single course might not be self-sustaining, but the entire program will still show a net income over expenses in the course of a year.

Program Personnel

Finally, adult/continuing education programs can be distinguished from traditional programs because of the personnel that are involved with them--faculty and administrators. The regular faculty of the institition are often used to teach these courses and usually are quite satisfactory. However, this assignment goes beyond their regular teaching load, requiring (1) additional compensation and (2) permission from their supervisors to undertake this responsibility, just as is required for any other "outside" job.

This responsibility might, moreover, compete with other demands on the instructor's time--advisement of individual students, advisement of student organizations, professional consultation, participation on institutional committees or in civic organizations, or other types of community service. If some of these activities carry greater rewards for salary advancement or promotion within the institution, the instructor might decline the invitation to teach an adult/continuing education course.

In this event, or if the course calls for instructional or content expertise that is not available from the regular faculty, an individual from the community might be hired to teach the course. This appointment is usually made on a part-time, special basis. That is, the person is not considered part of the regular faculty, nor is he/she entitled to fringe benefits or included within the self-governance or collective-bargaining system. Rather, the individual is retained on much the same basis as a consultant--hired to work for a short length of time on a particular project and then leaving when that work is completed. This does not, of course, preclude the same person's being hired again and again to teach a popular recurring course.

The honorarium or salary paid to these outside instructors often varies as much as do the fees assessed to students and responds to many of the same market factors. Teaching an adult/continuing education course might compete with other, more lucrative or rewarding choices that this instructor faces, or it might require extraordinary preparation that is not reflected solely

in the number of actual hours of "platform time" of instruction. Since the instructor's salary will comprise about two-thirds of the total expenses of the course, however, it is essential that it be carefully negotiated.

The person who administers the adult/continuing education programs is also a distinctive feature of this type of programming. Some institutions, having only a few adult/continuing education programs, expect area supervisors or department chairpersons to plan these courses just as they do the regular credit offerings. However, there is considerable merit in appointing a separate administrator, on at least a part-time basis, to assume primary responsibility for the adult/continuing education programs. This person should at least coordinate the logistical details and will probably also be highly involved in needs assessment, promotion, and budgeting. Even so, close ties should be maintained with the administrators and faculty of regular programs. This will ensure that high levels of educational quality are maintained, that course content is compatible, that equipment and facilities are shared equitably and amiably, and that the faculty remains aware of recent developments and student needs in each vocational area.

Chapter VIII

PROGRAM PLANNING: SELECTION OF ALTERNATIVES

Knowledge of the alternative programming options for vocational-technical education is a prerequisite for the rational development of local plans for vocational education. Knowing the available options provides the administrator with a wider range of choice in selecting the programming that will best meet the institution's goals and objectives.

How one goes about selecting which programs to maintain or initiate is the subject of other documents in this series.[8] However, for a general overview of the steps and criteria related to the development of local program plans, you may refer to sample 10.

---

8. To gain skill in program planning, you may wish to refer to Develop Local Plans for Vocational Education: Parts I and II, part of the Competency-Based Vocational Education Administrator Module Series (Columbus, OH: The Center for Vocational Education, The Ohio State University, 1977).

SAMPLE 10

CHECKLIST FOR DEVELOPING LOCAL PLANS FOR VOCATIONAL EDUCATION

In analyzing the general education goals and community planning base, the administrative staff needs to:

1. analyze existing general education goals
2. analyze state and federal legal requirements
3. assess community values, preferences, and expectations
4. review the school and community financial status

In assessing individual needs and interests, the administrative staff needs to:

5. study student vocational interests
6. assess student needs, especially needs of the disadvantaged and handicapped
7. consider student abilities data
8. consider parent preferences
9. assess adult training interests

In assessing the human resource needs of the area, the administrative staff needs to:

10. define the geographic boundaries of the region to be considered
11. specify the occupational boundaries for the assessment effort
12. obtain and review manpower data pertinent to the following levels:
    a. national level
    b. state level
    c. community or planning area
13. conduct an employer survey, if additional local data was needed
14. obtain and review manpower supply information pertinent to the following levels:
    a. national level
    b. state level
    c. community or planning area

In making a determination of the vocational programs and support services needed, the administrative staff needs to:

15. assemble the total needs data in an appropriate and understandable form
16. analyze the total needs data assembled
17. summarize in appropriate ways feedback on existing programs and support services
18. analyze the data available on existing programs and services
19. identify the vocational programs and services needed

20. provide adequate documentation of the vocational programs and services needed

21. identify the vocational programs and services that would alleviate the most important needs

In establishing vocational program goals and objectives, the administrative staff needs to:

22. prepare written statements that reflect all the priority program needs

23. prepare written statements that reflect all the priority support service needs

24. develop statements that are written at the right levels (overall program and occupational areas)

25. use relevant sources of information as inputs to the writing task

26. involve appropriate staff members and advisory committee personnel

27. state program objectives in measurable terms

28. develop both long- and short-range goals and objectives

In considering program and support service alternatives, the administrative staff needs to:

30. generate a number of alternatives for each program goal

31. assess the likely effectiveness of each alternative

32. assess the likely impact of each alternative

33. estimate the cost of each alternative

34. assess the compatibility of each proposed alternative with current programs

35. weigh the political feasibility of each alternative

In selecting the best alternative for achieving each program goal, the administrative staff needs to:

36. involve appropriate persons

37. predetermine relevant decision-making criteria

In the process of developing implementation plans, the administrative staff needs to:

38. prepare a work breakdown structure of major activities and events

39. determine detailed resource requirements

40. prepare a management plan that:

    a. includes beginning and ending dates for each major event or activitiy

    b. includes the assignment of personnel responsible for each activity

41. obtain approval of plans from the local advisory council and the school or college administration

42. complete an application for federal and state funds and submit it to the state department of education

In planning for the evaluation of vocational programs and supportive services, the administrative staff needs to:

43. consider alternative strategies and techniques for evaluation

44. develop a plan for evaluation that includes procedures for formative and summative evaluation of all the vocational programs and supportive services offered

NOTES

PART THREE

ACTIVITY

You may wish to extend your understanding of the vocational-technical program alternatives presented in this guide by completing the following activity. Select one or more of the program alternatives described:

- Integrated occupational experience
- Supplemental/remedial programs
- Special needs programs and services
- Competency-based education
- Vocational student organizations
- Adult/continuing education programs

Then, make arrangements to visit and observe each of the alternatives selected. You could, for example, arrange to observe several different programs in a single institution or to observe a single alternative (e.g., CBE) in several different institutions. A suggested observation form is provided on the pages following this explanation. Feel free to make extra copies of the form so that, during each visit, you could use one of the forms as a guide to learning (and documenting) all you can about each program through observation; interviews with students, staff, and administrators; and/or review of program documents.

NOTES

OBSERVATION FORM

Program Visited: _____

Date: _____

Persons Interviewed: _____

_____

1. Describe the program characteristics (e.g., goals, target audience served, scope of program).

2. Describe whether and how the program is integrated into the total vocational-technical program.

3. Describe the planning and implementation process used to develop and install the program.

4. Describe how the need for the program was determined (e.g., top down, bottom up, cooperatively).

5. Describe the impact of the program on the community and population served (e.g., reduction in dropout rate, increase in placement rates, potential economic contribution to the community.

6. Describe whether the program meets the goals and objectives as established.

Additional Recommended References

A Compilation of Federal Education Laws: As Amended Through June 30, 1977. Washington, DC: U.S. Government Printing Office, 1977.

Byers, Charles W., and Binkley, Harold R. *Handbook on Student Organizations in Vocational Education.* Danville, IL: The Interstate Printers and Publishers, 1981.

Glover, Robert W. *Apprenticeship in the United States: Implications for Vocational Education Research and Development.* Occasional Paper No. 66. Columbus, OH: The National Center for Research in Vocational Education, The Ohio State University, 1980.

Goldhammer, Keith, and Taylor, Robert E. *Career Education: Perspective and Promise.* Columbus, OH: Charles E. Merrill Publishing Company, 1972.

Houston, W. Robert, ed. *Exploring Competency Based Education.* Berkeley, CA: McCutchan Publishing Corporation, 1974.

The National Center for Research in Vocational Education, The Ohio State University. Professional Teacher Education Module Series, Category H: Student Vocational Organizations (six modules). Athens, GA: American Association for Vocational Instructional Materials, 1978.

The National Center for Research in Vocational Education, The Ohio State University. Professional Teacher Education Module Series, Category J: Coordination of Cooperative Education (ten modules). Athens, GA: American Association for Vocational Instructional Materials, 1978.

Roberts, Roy W. *Vocational and Practical Arts Education: History, Development, and Principles.* Third Edition. New York, NY: Harper and Row Publishers, 1971.

Somers, Gerald G., and Little, J. Kenneth. *Vocational Education: Today and Tomorrow.* Madison, WI: The University of Wisconsin, Center for Studies in Vocational and Technical Education, 1971. ED 050 276

VocEd (Journal of the American Vocational Association). 56 (September 1981): entire issue devoted to the theme of student organizations.

Wanat, John A., and Snell, Margaret A. *Cooperative Vocational Education: A Successful Education Concept. How to Initiate, Conduct and Maintain a Quality Cooperative Vocational Education Program.* Springfield, IL: Charles C. Thomas Publisher, 1980.

Any of the following publications from the American Vocational Association, 2020 North 14th Street, Arlington, VA 22201:

- *Burkett–Latest Word from Washington* by Melvin L. Barlow, 1977
- *Career Education,* edited by Joel H. Magisos, 1973
- *Comprehensive Planning for Vocational Education: A Guide for Administrators,* edited by Carl F. Lamar, 1978.
- *Industrial Arts in Education,* 1975
- *The Philosophy for Quality Vocational Education Programs,* edited by Melvin L. Barlow, 1974
- *The Unconquerable Senator Page: The Struggle to Establish Federal Legislation for Vocational Education* by Melvin L. Barlow, 1975
- *Vocational Education for Special Groups,* edited by James E. Wall, 1976
- *Vocational Instruction,* edited by Aleene A. Cross, 1980

Competency-Based Administrator Education Materials

LEADERSHIP & TRAINING (LT) SERIES

Category A: Program Planning, Development, and Evaluation

LT-A-1 Develop Local Plans for Vocational Education: Part I
LT-A-2 Develop Local Plans for Vocational Education: Part II
LT-A-3 Direct Program Evaluation

Category B: Instructional Management

LT-B-1 Direct Curriculum Development
LT-B-2 Guide the Development and Improvement of Instruction
LT-B-3 Manage the Development of Master Schedules

Category C: Student Services

LT-C-1 Manage Student Recruitment and Admissions
LT-C-2 Provide Systematic Guidance Services
LT-C-3 Maintain School Discipline
LT-C-4 Establish a Student Placement Service and Coordinate Follow-up Studies

Category D: Personnel Management

LT-D-1 Select School Personnel
LT-D-2 Supervise Vocational Education Personnel
LT-D-3 Evaluate Staff Performance
LT-D-4 Manage School Personnel Affairs

Category E: Professional and Staff Development

LT-E-1 Appraise the Personnel Development Needs of Vocational Teachers
LT-E-2 Provide a Staff Development Program
LT-E-3 Plan for Your Professional Development

Category F: School-Community Relations

LT-F-1 Organize and Work with a Local Vocational Education Advisory Council
LT-F-2 Promote the Vocational Education Program
LT-F-3 Involve the Community in Vocational Education
LT-F-4 Cooperate with Governmental and Community Agencies

Category G: Facilities and Equipment Management

LT-G-1 Provide Buildings and Equipment for Vocational Education
LT-G-2 Manage Vocational Buildings and Equipment
LT-G-3 Manage the Purchase of Equipment, Supplies, and Insurance

Category H: Business and Financial Management

LT-H-1 Prepare Vocational Education Budgets
LT-H-2 Identify Financial Resources for Vocational Education
LT-H-3 Develop Applications and Proposals for Funding Vocational Education

Category I: Program Improvement

LT-I-1 Use Information Resources to Help Improve Vocational Education Programs
LT-I-2 Use Inquiry Skills to Help Improve Vocational Education Programs

Supportive Materials

Guide to Vocational-Technical Education Program Alternatives: Secondary and Postsecondary—An Introduction
Guide to Using Competency-Based Vocational Education Administrative Materials
Resource Person's Guide to Implementing Competency-Based Administrator Education Concepts and Materials
An Introduction to Competency-Based Administrator Education (slide/audiotape)

For information regarding availability and prices of these materials contact—AAVIM, American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, University of Georgia, Athens, Georgia 30602, (404) 542-2586.

ISBN 0-89606-113-2